



# 2019 AOCs Annual Meeting & Expo

May 5–8 America's Center Convention Complex | St. Louis, Missouri, USA

## Edible Applications Technology (EAT) Interest Area Tentative Technical Program

As of February 12, 2019

*This presentation list is not final and is subject to change.*

*The presenter is the first author, or the author indicated with an asterisk (\*).*

### Monday Afternoon

#### **EAT 1: Structuring of Liquid Oil for Low SAFA and Non-trans Applications**

*Chairs: Jorge F. Toro-Vazquez, Universidad Autónoma de San Luis Potosí, Mexico; and Nils Hinrichsen, Archer Daniels Midland, Co., USA*

**Oleogels – from Scientific Feasibility to Applicability.** Eckhard Flöter\*, Technische Universität, Berlin

**Addition of High-melting Monoglyceride and Candelilla Wax Significantly Improved Oleogelation of Pulse Protein Foams.** Athira Mohanan, Michael Nickerson, and Supratim Ghosh\*, *University of Saskatchewan, Canada*

**Water-induced Self-Assembly of Hybrid Gelator System (Ceramide and Lecithin) for Edible Oil Structuring.** Shenglan Guo, and Yaqi Lan\*, *South China Agricultural University, China*

**Physicochemical Properties of Yellow Cake Produced with Menhaden Oil or Structured Lipid Organogels.** Sarah A. Willett\*, and Casimir C. Akoh, *University of Georgia, USA*

**Advanced Structure-Functional Properties of Lipids in Product Reformulation.** Filip Van Bockstaele<sup>1</sup>, and Koen Dewettinck<sup>\*2</sup>, <sup>1</sup>*Ghent University, Belgium*; <sup>2</sup>*University of Gent, Belgium*

**Chitosan-based Oleogels as trans Fat Replacer using Water-continuous Emulsions as Templates.** Gabriela B. Brito<sup>\*1</sup>, Vanessa O. Di-Sarli<sup>2</sup>, Matheus T. Martins<sup>1</sup>, Denes K. Rosário<sup>1</sup>, Karina F. Delgado<sup>1</sup>, Carlos A. Conte-Júnior<sup>1</sup>, Torres Alexandre<sup>3</sup>, and Gabriela B. Baptista<sup>1</sup>, <sup>1</sup>*Federal Fluminense University, Brazil*; <sup>2</sup>*Federal University of Rio de Janeiro, Brazil*; <sup>3</sup>*UFRJ, Brazil*

**Interactions Between Candelilla Wax and Saturated Triacylglycerols in Oleogels Formation.** Thais Silva<sup>\*1</sup>, Daniel B. Arellano<sup>2</sup>, and Silvana Martini<sup>3</sup>, <sup>1</sup>*Utah State University - Nutrition, Dietetics and Food Sciences Department, USA*; <sup>2</sup>*Unicamp, Brazil*; <sup>3</sup>*Utah State University, USA*

**Oleogels Based on the Small Molecule Food Emulsifier: Macroscopic Property, Microstructure, and Application.** Zong Meng<sup>\*1</sup>, Ying Guo<sup>2</sup>, and Yuanfa Liu<sup>3</sup>, <sup>1</sup>*School of Food Science and Technology, Jiangnan University, China*; <sup>2</sup>*School of Food Science and Technology, Jiangnan*

University, China; <sup>3</sup>School of Food Science and Technology, State Key Laboratory of Food Science and Technology, Jiangnan University, China

### **EAT 1.1 / H&N 1.1: Structural Determinates of the Metabolic Response for Lipids**

*Chairs: Pamela Hutton, Bunge Lodgers Croklaan, USA; and Michael Rogers, University of Guelph, Canada*

**Replacement of Saturated Fat with Unsaturated Fats from Different Food Sources: Implications for Cardiovascular Risk.** Kristina S. Petersen\*, *The Pennsylvania State University, USA*

**Foodomics Insights in the Health Effects of Vegetable Oil.** YongJiang Xu\*<sup>1</sup>, Chen Cao<sup>1</sup>, Zhaojun Zheng<sup>1</sup>, and Yuanfa Liu<sup>2</sup>, <sup>1</sup>*Jiangnan University, China*; <sup>2</sup>*School of Food Science and Technology, State Key Laboratory of Food Science and Technology, Jiangnan University, China*

**Musseling-up Program: Review of Greenshell Mussel Bioactive Lipids and Role in Inflammation Management and Joint Health.** Matthew R. Miller\*<sup>1</sup>, Marlena C. Kruger<sup>2</sup>, Fran M. Wolber<sup>2</sup>, Hong Tian Hong Tian<sup>3</sup>, Parkpoon Siriarchavatana<sup>2</sup>, and Saima Rizwan<sup>4</sup>, <sup>1</sup>*Cawthron, New Zealand*; <sup>2</sup>*Massey University, New Zealand*; <sup>3</sup>*Sanford Ltd, New Zealand*; <sup>4</sup>*Riddet Institute, New Zealand*

**Serum  $\beta$ -carotene Concentrations is Inversely Associated with Reported Fatty Acid Intake in U.S. Adults.** Ambria Crusan\*<sup>1</sup>, Marla Reicks<sup>1</sup>, and Susan K. Raatz<sup>2</sup>, <sup>1</sup>*University of Minnesota, USA*; <sup>2</sup>*USDA, ARS, Grand Forks Human Nutrition Research Center, USA*

**Oleogelation of Emulsified Oil Delays in vitro Intestinal Lipid Digestion.** D errick Rousseau\*, *Ryerson University, Canada*

**Encapsulation, Protection and Controlled Release of Nutraceuticals using Biopolymer Microgel.** Zipei Zhang\*, and D. Julian J. McClements, *University of Massachusetts Amherst, USA*

**Bioavailability of Pesticide Residue in Agricultural Products: Impact of Food Emulsions with Different Surface Properties.** Ruojie Zhang\*, and D. Julian J. McClements, *University of Massachusetts Amherst, USA*

**Impact of Indigestible Oils on the Bioaccessibility of Vitamin D3 in Nanoemulsion-based Delivery Systems.** Yunbing Tan\*<sup>1</sup>, and D. Julian J. McClements<sup>2</sup>, <sup>1</sup>*Dept. of Food Science, University of Massachusetts, Amherst, USA*; <sup>2</sup>*University of Massachusetts Amherst, USA*

### Tuesday Morning

#### **EAT 2: Crystallization Behavior of Fats and Oils**

*Chairs: Alejandro Marangoni, University of Guelph, Canada; and Kiyotaka Sato, Hiroshima University, Japan*

**Pressure Induced Triolein Crystals.** Andr e Ro bach<sup>1</sup>, Leo A. Bahr<sup>1</sup>, Sebastian G bel<sup>1</sup>, Angela Mayer<sup>1</sup>, Peter Ferstl<sup>2</sup>, Andreas S. Braeuer<sup>1</sup>, and Andreas Wierschem\*<sup>1</sup>, <sup>1</sup>*Friedrich-Alexander-Universit t Erlangen-N rnberg, Germany*; <sup>2</sup>*Technische Universit t M nchen, Germany*

**Triglyceride Crystallisation Model based on Fatty Acid Interaction Coefficients.** Rasmus L. Miller\*, and Eckhard Flöter, *DuPont, Denmark*

**A Phenomenological Theory of Polymorphic Phase Transitions in Triacylglycerol Crystals.** David A. Pink\*, *St. Francis Xavier University, Canada*

**Heterogeneous Nucleation of a Cocoa Butter Triglyceride on Surfaces Formed by Tristearin.** Edmund Daniel T. Co\*<sup>1</sup>, Saeed M. Ghazani<sup>1</sup>, David A. Pink<sup>2</sup>, and Alejandro G. Marangoni<sup>1</sup>, <sup>1</sup>*University of Guelph, Canada*; <sup>2</sup>*St. Francis Xavier University, Canada*

**Lipid Sonocrystallization: What have we learned? What is next?.** Silvana Martini\*, *Utah State University, USA*

**Crystallization and Polymorphic Behavior of Cocoa Butter in Fresh Cacao Beans.** Laura Bayés-García\*<sup>1</sup>, Teresa Calvet<sup>1</sup>, Tetsuo Koyano<sup>2</sup>, and Kiyotaka Sato<sup>3</sup>, <sup>1</sup>*Universitat de Barcelona, Spain*; <sup>2</sup>*Meiji Co., Japan*; <sup>3</sup>*Hiroshima University, Japan*

**New Insight into Molecular Origins of Cocoa Butter Polymorphism.** Saeed M. Ghazani\*, and Alejandro G. Marangoni, *University of Guelph, Canada*

**Physical Properties and Fat Bloom Stability of Dark Chocolate Made of Ternary Fat Blends of Cocoa Butter/OSO- Fat/Lauric-based CBS.** Shimpei Watanabe\*<sup>1</sup>, Shinichi Yoshikawa<sup>2</sup>, and Kiyotaka Sato<sup>3</sup>, <sup>1</sup>*Fuji Oil. Japan, Japan*; <sup>2</sup>*Foiji Oil. Japan, Japan*; <sup>3</sup>*Hiroshima University, Japan*

**Fat Bloom Caused by De-oiling from Chocolate Surface.** Sohei Sato\*<sup>1</sup>, Hironori Hondoh<sup>2</sup>, and Satoru Ueno<sup>2</sup>, <sup>1</sup>*Hiroshima University, Japan*; <sup>2</sup>*Graduate School of Biosphere Science, Hiroshima University, Japan*

**Development of Peppermint Essential Oil-Loaded Hollow Solid Lipid Micro- and Nanospheres as Natural Food Antimicrobials.** Junsu Yang\*<sup>1</sup>, Car Reen Kok<sup>2</sup>, Robert Hutkins<sup>2</sup>, and Ozan N. Ciftci<sup>1</sup>, <sup>1</sup>*University of Nebraska-Lincoln, USA*; <sup>2</sup>*University of Nebraska-Lincoln, United States*

**Polymer Coated Fat Crystals as Oil Structuring Agents: Fabrication and Oleogelation Properties.** Mohd Dona Bin Sintang\*<sup>1</sup>, Tom Rimaux<sup>2</sup>, Sabine Danthine<sup>3</sup>, and Koen Dewettinck<sup>4</sup>, <sup>1</sup>*Faculty of Food Science and Nutrition, Malaysia*; <sup>2</sup>*Vandemoortele R&D Centre, Belgium*; <sup>3</sup>*University of Liège, Belgium*; <sup>4</sup>*University of Gent, Belgium*

## **EAT 2a / PCP 2b: Plant Protein Utilization in Food Products**

*Chairs: Baraem Ismail, University of Minnesota, USA; and Graciela Padua, University of Illinois, USA*

**Rheological Assessment of Ethanol Induced Plant Protein Gels.** Nahla Kreidly\*<sup>1</sup>, Graciela W. Padua<sup>2</sup>, and Hakime Yavuz<sup>3</sup>, <sup>1</sup>*University of Illinois at Urbana Champaign, USA*; <sup>2</sup>*University of Illinois, USA*; <sup>3</sup>*University of Illinois at Urbana Champaign, United States*

**Plants to Meat: Utilizing Plant Proteins to Satisfy the Carnivores.** Ines Resano Goizueta\*, *Impossible Foods, USA*

**Soy Protein-based Nanoparticles and Derivatives as Bioavailability Enhancers for Bioactive Compounds.** Qin Wang\*, *University of Maryland, USA*

**Overcoming the Challenges in the Production and Utilization of Plant Protein Isolates in Food Products.** Nagul Naguleswaran\*, *Ingredion, USA*

**Improvement of Targeted Pea Protein Functionalities for Beverage Applications.** Serpil Metin\*<sup>1</sup>, Sonia Han<sup>2</sup>, and Tasha Hermes<sup>3</sup>, <sup>1</sup>*Cargill R&D, USA*; <sup>2</sup>*Cargill, United States*; <sup>3</sup>*Cargill Inc., United States*

**Structural and Functional Properties of Plant Protein Isolates and Hydrolysates for Various Applications.** Baraem Ismail\*, *University of Minnesota, USA*

## Tuesday Afternoon

### **EAT 3: Implication of Lipids Structuring in Food Application**

*Chairs: Kaustuv Bhattacharya, DuPont Nutrition & Biosciences ApS, Denmark; and Jose Trujillo, Chemtech, Peru*

**A Novel Strategy for Increasing Solid Fat Content of Oils without Addition of Saturated or trans Fats or Oil Gelling Compounds.** Alejandro G. Marangoni\*, and Reed A. Nicholson, *University of Guelph, Canada*

**Controlling the Texture of Oil-continuous Systems by Filler Particles.** Auke de Vries\*, and D errick Rousseau, *Ryerson University, Canada*

**Development of Solids in Palm Oil at Varying Cooling Temperatures.** Neil R. Widlak\*, *ADM, USA*

**Structuring Lipids Through Enzymatic Glycerolysis.** Reed A. Nicholson\*, and Alejandro G. Marangoni, *University of Guelph, Canada*

**Effect of storage time on physical properties of sonocrystallized all-purpose shortening.** Juhee Lee\*, Melissa Marsh, and Silvana Martini, *Utah State University, USA*

**Application of Spray-dried Oil Powder in Oil-in-Fat Dispersions.** Iris Tavernier<sup>1</sup>, Bart Heyman<sup>2</sup>, Tony Ruyssen<sup>1</sup>, Paul Van Der Meeren<sup>1</sup>, Filip Van Bockstaele\*<sup>1</sup>, and Koen Dewettinck<sup>3</sup>, <sup>1</sup>*Ghent University, Belgium*; <sup>2</sup>*Vandemoortele lipids R&D, Belgium*; <sup>3</sup>*University of Gent, Belgium*

**Sensory Evaluation and Physical Properties of Wax-stabilized Peanut Butter.** Jill Moser\*<sup>1</sup>, Julie Anderson, Hong-Sik Hwang<sup>1</sup>, Jeffrey A. Byars<sup>1</sup>, and Mukti Singh<sup>2</sup>, <sup>1</sup>*USDA, ARS, NCAUR, USA*; <sup>2</sup>*NCAUR, ARS, USDA, USA*

**Practical Experiences on Fat Crystallization in Food and Non-food Industry.** Jose Trujillo\*, *Chemtech, Peru*

### **ANA 3.1 / EAT 3.1 / IOP 3.1: Analysis of PUFA and Fat Soluble Vitamin Analysis with Emphasis on Nutrition Labeling, and Food Applications of Low Saturated Fats/Oils**

*Chairs: Jillonne Kevala, US Food and Drug Administration, USA; and Serpil Metin, Cargill, USA*

**Modernizing the Nutrition Facts and Supplement Facts Labels.** Jillonne H. Kevala\*, *Food and Drug Administration, USA*

**Low Saturate High Oleic Canola Oil in Health and Nutrition.** Xiaolan Luo\*<sup>1</sup>, Nisa Tharayil<sup>2</sup>, and Diliara Iassonova<sup>3</sup>, <sup>1</sup>*Cargill, USA*; <sup>2</sup>*Cargill, United States*; <sup>3</sup>*Cargill Inc., USA*

**Validation of a HPLC Method for Analysis of Provitamin A Carotenoids ( $\beta$ -carotene,  $\alpha$ -carotene and  $\beta$ -cryptoxanthin).** Sneha Bhandari\*<sup>1</sup>, and Ming Gao<sup>2</sup>, <sup>1</sup>*Merieux Nutrisciences, USA*; <sup>2</sup>*Merieux NutriSciences, USA*

**Rheology and Baking Stability of Water in Oil Emulsion Designed as Low saturated Bakery Shortening.** Fernanda Davoli\*<sup>1</sup>, Serpil Metin<sup>2</sup>, and Paul Smith<sup>3</sup>, <sup>1</sup>*Cargill, USA*; <sup>2</sup>*Cargill R&D, USA*; <sup>3</sup>*Cargill Global Foods Research, Belgium*

**Quantification of Furan Fatty Acids by LC-MS/MS and their Identification in New Zealand Marine Oils.** Matthew R. Miller\*<sup>1</sup>, Donato Romanazzi<sup>2</sup>, Hajime Uchida<sup>3</sup>, Johnathon Puddick<sup>2</sup>, Yutaka Itabashi<sup>3</sup>, Masashi Hosokawa<sup>4</sup>, Toshiyuki Suzuki<sup>3</sup>, and Michael Boundy<sup>2</sup>, <sup>1</sup>*Cawthron, New Zealand*; <sup>2</sup>*Cawthron Institute, New Zealand*; <sup>3</sup>*National Research Institute of Fisheries Science, Japan*; <sup>4</sup>*Hokkaido University, Japan*

### Wednesday Morning

#### **EAT 4: Phase Transition and Interfacial Phenomena in Complex Food System**

*Chairs: D errick Rousseau, Ryerson University, Canada; and Ravin Gnanasambandam, USA*

**Hydrophilic Fat Crystals: Partitioning Across an O/W Interface.** Richard W. Hartel\*, *University of Wisconsin-Madison, USA*

**Aqueous Droplets as Active and Inactive Fillers in Crystal-stabilized Water-in-Oil Emulsions.** D errick Rousseau\*, *Ryerson University, Canada*

**Crystal Stabilization of Edible Oil Foams.** Filip Van Bockstaele\*<sup>1</sup>, Lien Tytgat<sup>1</sup>, Robbe Heymans<sup>1</sup>, Tom Rimaux<sup>2</sup>, and Koen Dewettinck<sup>3</sup>, <sup>1</sup>*Ghent University, Belgium*; <sup>2</sup>*Vandemoortele R&D Centre, Belgium*; <sup>3</sup>*University of Gent, Belgium*

**Formation of Low Density and Free-flowing Hollow Microparticles from Butter and Fractionated Palm Oil Mixture.** Junsi Yang\*, Joshua Gudeman, and Ozan N. Ciftci, *University of Nebraska-Lincoln, USA*

**High Shear and Ultrasound-assisted Emulsification as Methods for Preparing Sacha Inchi (*Plukenetia volubilis* L.) Oil Emulsions.** Lina-Marcela Gonzalez Cardoso\*<sup>1</sup>, Claudia Elizabeth Mora Huertas<sup>2</sup>, and Luis-Felipe Guti errez<sup>3</sup>, <sup>1</sup>*Facultad de Ciencias Agrarias - Universidad Nacional de Colombia Sede Bogot , Colombia*; <sup>2</sup>*Departamento de Farmacia, Universidad Nacional de Colombia Sede Bogot , Colombia*; <sup>3</sup>*Instituto de Ciencia y Tecnolog a de Alimentos - Universidad Nacional de Colombia Sede Bogot , Colombia*

**Performance of a Dairy Based Phospholipid Ingredient in a Low-fat Spread Product.** Pravin Gadkari, Ravin Gnanasambandam, and Supratim Ghosh\*, *University of Saskatchewan, Canada*

**Vegetable and Mineral Oil Organogels Based on Monoglyceride and Lecithin Mixtures.** Jorge F. Toro-Vazquez\*<sup>1</sup>, Mayra Aguilar-Zarate<sup>1</sup>, Flor Alvarez-Mitre<sup>2</sup>, and Miriam A. Charo-Alonso<sup>1</sup>, <sup>1</sup>*Universidad Aut onoma de San Luis Potos , Mexico*; <sup>2</sup>*Universidad Aut onoma de San Luis Potos , Mexico*

**Characterization of Whey Protein-Lipid Interactions within Oleocolloid Matrices through Infrared and Raman Spectroscopy.** Clifford Park\*<sup>1</sup>, Terrence Dent<sup>2</sup>, Rafael Jimenez-Flores<sup>1</sup>, and Farnaz Maleky<sup>3</sup>, <sup>1</sup>*The Ohio State University, USA*; <sup>2</sup>*The Ohio State University, United States*; <sup>3</sup>*Ohio State University, USA*

**On the Importance of Minor Components and Oil Properties for Oleogel Strength.** Maria Scharfe\*, and Eckhard Flöter, *TU Berlin, Deutschland*

#### **EAT-P: Edible Applications Technology Poster Session**

*Chair: Farnaz Maleky, Ohio State University, USA*

**Regression Analysis as a Tool to Explore Processing Effects in Palm-based Dispersions.** Ryan West\*, and Dérick Rousseau, *Ryerson University, Canada*

**Optimizing Fat Matrices for the Minimization of Moisture Transport.** Dennis R. Heldman<sup>1</sup>, Farnaz Maleky<sup>2</sup>, and Brandon Howard\*<sup>3</sup>, <sup>1</sup>*The Ohio State University, USA*; <sup>2</sup>*Ohio State University, USA*; <sup>3</sup>*The Ohio State University, US*

**Crystallization Behaviour of Cocoa Butter and Cocoa Butter-sugar Composites Affected by Lecithin and PGPR.** Selvyn Simoes\*, and Dérick Rousseau, *Ryerson University, Canada*

**Effect of Degree of De-acetylation of Chitosan on the Gelation Behavior of CITREM-chitosan Stabilized Bilayer Nanoemulsions.** Kunal Kadiya\*<sup>1</sup>, and Supratim Ghosh<sup>2</sup>, <sup>1</sup>*Department of Food and Bioproduct Sciences, University of Saskatchewan, Canada*; <sup>2</sup>*University of Saskatchewan, Canada*

**The Influence of Lecithin and PGPR on the Properties of Oil-Sugar Dispersions.** Jessica K. Phulchand\*, and Dérick Rousseau, *Ryerson University, Canada*

**Phase Behavior of Monoglyceride Mixtures in Vegetable and Mineral Oil.** Maria E. Charó-Alvarado\*<sup>1</sup>, Flor Alvarez-Mitre<sup>1</sup>, Miriam A. Charo-Alonso<sup>2</sup>, and Jorge F. Toro-Vazquez<sup>2</sup>, <sup>1</sup>*Universidad Autónoma de San Luis Potosí, Mexico*; <sup>2</sup>*Universidad Autónoma de San Luis Potosí, Mexico*

**Melting Behavior and Volumetric Expansion of Solid Lipids in Pressurized Carbon Dioxide.** Junsi Yang\*, and Ozan N. Ciftci, *University of Nebraska-Lincoln, USA*

***In vitro* Digestibility of the Novel Fish Oil-loaded Hollow Solid Lipid Micro- and Nanoparticles.** Junsi Yang\*, and Ozan N. Ciftci, *University of Nebraska-Lincoln, USA*

**Effect of Polysaccharide Charge on the Formation and Properties of Pea Protein Isolate-pectin Complexes.** Yang Lan\*, and Jiajia Rao, *North Dakota State University, USA*

**Effect of the Addition Order of  $\alpha$ -tocopherol and Candelilla Wax on the Oleogel Texture.** Vanessa O. Di Sarli\*<sup>1</sup>, Gabriela B. Brito<sup>2</sup>, Karina F. Delgado<sup>2</sup>, Denes K. Rosário<sup>2</sup>, Carlos A. Conte-Júnior<sup>2</sup>, Torres Alexandre<sup>3</sup>, and Vanessa N. Castelo-Branco<sup>2</sup>, <sup>1</sup>*Federal University of Rio de Janeiro, Brazil*; <sup>2</sup>*Federal Fluminense University, Brazil*; <sup>3</sup>*UFRJ, Brazil*

**Tailoring Physical Properties of Monoglyceride Oleogels by using High Intensity Ultrasound and Cooling Rate.** Anabella S. Giacomozzi\*<sup>1</sup>, Camila Palla<sup>2</sup>, María E. Carrín<sup>2</sup>, and Silvana Martini<sup>3</sup>, <sup>1</sup>*Universidad Nacional del Sur, Argentina*; <sup>2</sup>*Departamento de Ingeniería Química (DIQ) - Universidad Nacional del Sur (UNS), Argentina*; <sup>3</sup>*Utah State University, USA*

**The Effect of Rheological Properties and Melting Behavior of Oleogels on 3D Edible Printing.** Allan Madsen<sup>1</sup>, and Bianca Perez\*<sup>2</sup>, <sup>1</sup>*Teknologisk Institut, Denmark*; <sup>2</sup>*Teknologisk Institut, Danmark*

**Effects of Chemical Interesterification on the Palm Oil based Triacylglycerols Solid Fat Content and its Application in Plastic Fats.** Zhen Zhang\*, *South China University of Technology, China*

**Development of Oleogels by Ethylcellulose and Monoglycerides in Vegetable Oil.** Jorge F. Toro-Vazquez\*<sup>1</sup>, Martha Garcia-Ortega<sup>1</sup>, Miriam A. Charo-Alonso<sup>1</sup>, Anaid De la Peña-Gil<sup>2</sup>, and Flor Alvarez-Mitre<sup>2</sup>, <sup>1</sup>*Universidad Autónoma de San Luis Potosí, Mexico*; <sup>2</sup>*Universidad Autónoma de San Luis Potosí, Mexico*

**Impact of Curcumin-loading Methods on Lipid Nanoparticles Bioaccessibility: Comparison of Heat-driven and pH-driven Method.** D. Julian J. McClements<sup>1</sup>, Xiaoyun Zhang<sup>2</sup>, Shengpeng Pen<sup>2</sup>, and Bingjing Zheng\*<sup>3</sup>, <sup>1</sup>*University of Massachusetts Amherst, USA*; <sup>2</sup>*University of Massachusetts, Amherst, USA*; <sup>3</sup>*University of Massachusetts Amherst, Food Biopolymers and Colloids Lab, USA*

**Polymorphic Behavior of Cupuassu Fat and its Fractions as Affected by Thermal Treatments.** Ana C. Rodriguez Negrette<sup>1</sup>, Maria J. Rodriguez Batiller<sup>1</sup>, and Maria L. Herrera\*<sup>2</sup>, <sup>1</sup>*University of Buenos Aires-ITPN, Argentina*; <sup>2</sup>*University of Buenos Aires, Argentina*

**Electrostatic Complexes of Ascorbic Acid with Natural Biopolymers to Promote Stability.** Jorge L. Muriel Mundo\*<sup>1</sup>, and D. Julian J. McClements<sup>2</sup>, <sup>1</sup>*University of Massachusetts, USA*; <sup>2</sup>*University of Massachusetts Amherst, USA*

**Effect of Dissolved CO<sub>2</sub> and Low Power Ultrasound on Crystallization Behaviour of Anhydrous Milk Fat.** Bhaskar M. Adhikari\*<sup>1</sup>, Tuyen Truong<sup>2</sup>, Nidhi Bansal<sup>2</sup>, and Bhesh Bhandari<sup>2</sup>, <sup>1</sup>*The University of Queensland, Australia*; <sup>2</sup>*School of Agriculture and Food Sciences, The University of Queensland, Australia*

**Formation of Oleogel as a Replacement of Shortening in Cookies: Impact of Oil Type.** Leqi Cui\*<sup>1</sup>, and Bingcan Chen<sup>2</sup>, <sup>1</sup>*North Dakota State University, United States*; <sup>2</sup>*North Dakota State University, USA*

**Revealing the Modulation of Temperature on Triacylglycerol Crystal Networks in Semicrystalline Oil-in-Water Emulsions.** Liu Chunhuan\*<sup>1</sup>, Zheng Zhaojun<sup>1</sup>, Chen Cao<sup>2</sup>, and Yuanfa Liu<sup>3</sup>, <sup>1</sup>*Jiangnan university, China*; <sup>2</sup>*Jiangnan University, China*; <sup>3</sup>*School of Food Science and Technology, State Key Laboratory of Food Science and Technology, Jiangnan University, China*

**Use of High Intensity Ultrasound to Change the Physical Properties of Oleogels and Emulsion Gels.** Thais Silva<sup>1</sup>, Daniel B. Arellano<sup>2</sup>, and Silvana Martini\*<sup>3</sup>, <sup>1</sup>*Utah State University - Nutrition, Dietetics and Food Sciences Department, USA*; <sup>2</sup>*Unicamp, Brazil*; <sup>3</sup>*Utah State University, USA*

**Assessing the Bioavailability of Curcumin in Oleogels.** Robert M. Hallinan\*<sup>1</sup>, Chureeporn Chitchumroonchokchai<sup>1</sup>, and Farnaz Maleky<sup>2</sup>, <sup>1</sup>*The Ohio State University, United States*; <sup>2</sup>*Ohio State University, USA*

**Phase Behavior, Structure, and Rheology of Oleogels Produced with Candelilla Wax, Saturated Fat and Microcrystalline Cellulose.** Jaime D. Pérez-Martínez<sup>1</sup>, Luz Vviridiana Pérez-Meza\*<sup>2</sup>, and Miguel Ángel Ruíz-Cabrera<sup>2</sup>, <sup>1</sup>*Lab. Biopolímeros Alimentarios, Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosí, Av. Manuel Nava No. 6, 78210, México., Mexico;* <sup>2</sup>*Universidad Autónoma de San Luis Potosí, Mexico*

**Characterization of Emulsions Based on Oleogels Structured with Commercial and Recovered Sunflower Waxes.** Julie Merchan Sandoval<sup>1</sup>, Anabella S. Giacomozzi\*<sup>2</sup>, Camila Palla<sup>3</sup>, Amalia Carelli<sup>4</sup>, and Erica Baumler<sup>1</sup>, <sup>1</sup>*Planta Piloto de Ingeniería Química (CONICET), Argentina;* <sup>2</sup>*Universidad Nacional del Sur, Argentina;* <sup>3</sup>*Departamento de Ingeniería Química (DIQ) - Universidad Nacional del Sur (UNS), Argentina;* <sup>4</sup>*Planta Piloto de Ingeniería Química (PLAPIQUI, UNS-CONICET), Argentina*

**Performance of Sunflower Waxes Recovered from Oil Tank Settlings as Oil Structurant Agents.** Cintia Redondas<sup>1</sup>, Anabella S. Giacomozzi\*<sup>2</sup>, Erica Baumler<sup>1</sup>, and Amalia Carelli<sup>3</sup>, <sup>1</sup>*Planta Piloto de Ingeniería Química (CONICET), Argentina;* <sup>2</sup>*Universidad Nacional del Sur, Argentina;* <sup>3</sup>*Planta Piloto de Ingeniería Química (PLAPIQUI, UNS-CONICET), Argentina*

#### Wednesday Afternoon

##### ***AOCS Member + Volunteers Appreciation Luncheon***

*12:30–2 p.m.*

*Complimentary with all meeting registration types.*

##### ***“Meet Me in St. Louis” Afternoon Excursion***

*3–7 p.m.*

*Departs from the Marriott Grand*

*Optional event. Ticket purchase is required.*