



2019 AOCs Annual Meeting & Expo

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

Health and Nutrition (H&N 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

H&N 1: Lipids and Inflammation

Chair: Eric Murphy, University of North Dakota, USA

Increase in Plasma Ganglioside Content is Associated with Improved Quality of Life in Inflammatory Bowel Disease. John J. Miklavcic*¹, Glen Shoemaker², Kareena L. Schnabl³, Alan BR Thomson⁴, Vera Mazurak², and M Tom Clandinin⁵, ¹Chapman University, USA; ²University of Alberta, Canada; ³Laboratory Medicine and Pathology, University of Alberta, Canada; ⁴Gastroenterology, Western University, Canada; ⁵Centre for Health and Nutrition, University of Alberta, Canada

Endocannabinoids and Inflammation. Bruce A. Watkins*, University of California, Davis, USA

Oxylipins in Kidney Inflammation. Harold M. Aukema*, University of Manitoba, Canada

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*¹, Chen Cao¹, Zhaojun Zheng¹, and Yuanfa Liu², ¹Jiangnan University, China; ²School 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*¹, Marlena C. Kruger², Fran M. Wolber², Hong Tian Hong Tian³, Parkpoon Siriarchavatana², and Saima Rizwan⁴, ¹Cawthron, New Zealand; ²Massey University, New Zealand; ³Sanford Ltd, New Zealand; ⁴Riddet Institute, New Zealand

Serum β -carotene Concentrations is Inversely Associated with Reported Fatty Acid Intake in U.S. Adults. Ambria Crusan*¹, Marla Reicks¹, and Susan K. Raatz², ¹University of Minnesota, USA; ²USDA, 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*¹, and D. Julian J. McClements², ¹Dept. of Food Science, University of Massachusetts, Amherst, USA; ²University of Massachusetts Amherst, USA

Tuesday Morning

H&N 2: Brain Lipid Biochemistry

Chairs: Eric Murphy, University of North Dakota, USA; and Charles Nider, Abitec Corp., USA

Shotgun Lipidomics Sheds Light on Diabetic Neuropathy. Xianlin Han*, University of Texas Health Science Center at San Antonio, United States

Additional session details pending.

Tuesday Afternoon

H&N 3: Dairy Fatty Acids and Health

Chairs: Moises Torres-Gonzalez, National Dairy Council, USA; and Ignacio Vieitez, UdelaR, Uruguay

Saturated Fat and Cardiometabolic Health. Moises Torres-Gonzalez*, National Dairy Council, USA

Dairy Fat and Cardiometabolic Health. Mario Kratz*, Fred Hutchinson Cancer Research Center, USA

Effects of Medium- and Long-chain Triacylglycerols on Lipid Metabolism and Host Faecal Microbiota Composition in C57BL/6J Mice. Shengmin Zhou*¹, Yuan Rong Jiang², and Liangli Yu³, ¹Wilmar Global R&D Center, China; ²Wilmar Biotechnology R&D Center (Shanghai) Co., Ltd., China; ³Dept. of Nutrition and Food Science, University of Maryland, USA

Dairy Fatty Acids: Potential Benefits. Jana Kraft*, and Allison Unger, The University of Vermont, US

Other Dairy Fat Components with Potential Health Benefits: Milk Phospholipids. Christopher N. Blesso*, University of Connecticut, USA

A Novel Dietary Oil Rich in Pentadecanoic (C15:0) and Heptadecanoic (C17:0) Odd-chain Fatty Acids. Eneko Ganuza*¹, and Magdalena Amezcua², ¹*Heliae Development LLC, United States*; ²*Heliae Development LLC., United States*

Wednesday Morning

H&N 4: Health and Nutrition Awards and General Topics

Chairs: Matthew Picklo, USDA, ARS, Grand Forks Human Nutrition Research Center, USA; and Elisa Di Stefano, University of Ottawa, Canada

Oxidized dietary fat: a novel risk factor of inflammatory bowel disease and colon cancer via altering gut microbiota. Guodong Zhang*, *UMass-Amherst, USA*

4-HNE, an Endogenous Lipid Peroxidation Product, Exacerbates Colonic Inflammation through Activation of Toll-like Receptor 4 Signaling. Yuxin Wang*¹, Weicang Wang², and Guodong Zhang³, ¹*UMASS, United States*; ²*UMass-Amherst, United States*; ³*UMass-Amherst, USA*

Anti-inflammatory Effect of a Novel Metabolite from Marine Carotenoid Fucoxanthin. Masashi Hosokawa*, Naoki Takatani, Daisuke Taya, Fumiaki Beppu, and Kazuo Miyashita, *Hokkaido University, Japan*

Oxidized Triacylglycerols from Grape Seed Oil Modulate Phospholipid Pool in Gastric Cells. Sarah Frühwirth¹, Sofie Zehetner¹, Mohammed Salim¹, Sonja Sterneder¹, Barbara Lieder¹, Luca Nicolotti², Martin Zehl³, Markus Herderich², Veronika Somoza¹, and Marc Pignitter*¹, ¹*Department of Physiological Chemistry, Faculty of Chemistry, University of Vienna, Austria*; ²*Metabolomics South Australia, Australian Wine Research Institute, Adelaide, Australia*; ³*Department of Analytical Chemistry, Faculty of Chemistry, University of Vienna, Austria*

Comparison of Postprandial Triacylglycerols and Satiety Ratings by Healthy Men Following Ingestion of Tempered Palm Stearin-based Emulsions Containing Droplets in Different Physical States. Samar Hamad*¹, Surangi KPH Thilakarathna², Amanda Cuncins³, Melissa Brown², and Amanda Wright², ¹*University of Gueloh, Canada*; ²*University of Guelph, Canada*; ³*University of Guelph, Canada*

Analysis of Plasmalogen Species in Serum and Post-mortem Brain Tissue of Alzheimer's Disease Patients. Yurika Otoki*¹, Shunji Kato¹, Kiyotaka Nakagawa¹, Di Yu², Danielle J. Harvey³, Lee-Way Jin³, Britany N. Dugger³, Walter Swardfager², and Ameer Taha⁴, ¹*Tohoku University, Japan*; ²*Sunnybrook Research Institute, Canada*; ³*University of California, Davis, United States*; ⁴*University of California, Davis, USA*

Applying Carbon-13 Natural Abundance in Human Plasma as a Tool for the Assessment of n-3 Polyunsaturated Fatty Acid Metabolism. Adam H. Metherel*¹, Maha Irfan¹, Shannon L. Klingel², David M. Mutch², and Richard P. Bazinet¹, ¹*University of Toronto, Canada*; ²*University of Guelph, Canada*

Lipidomic Profiling Reveals Soluble Epoxide Hydrolase as a Therapeutic Target of Obesity-induced Colonic Inflammation. Weicang Wang*¹, Jun Yang, Jianan Zhang, Yuxin Wang¹, Katherine Z. Sanidad², Zhenhua Liu², Bruce D. Hammock, and Guodong Zhang³, ¹*UMass-Amherst, United States*; ²*University of Massachusetts-Amherst, United States*; ³*UMass-Amherst, USA*

Why Fat Was the Dietary Devil ... and Then it Wasn't. David M. Klurfeld*, *USDA Agricultural Research Service, USA*

H&N-P: Health and Nutrition Poster Session

Chair: Matthew Picklo, USDA, ARS, Grand Forks Human Nutrition Research Center, USA

In-vitro release profiles of compounds from water-in-oil emulsions stabilized with crystalline or liquid interfaces. Vivekkumar H. Patel*, and Dérick Rousseau, *Ryerson University, Canada*

Ursolic acid attenuates 6-hydroxydopamine induced-apoptosis through up-regulation of OPA1 in SH-SY5Y cells. Fang-Ting Chang¹, Chia-Yuan Lin², and Chia-Wen Tsai*¹, ¹*China Medical University, Taiwan*; ²*China Medical*

Incorporation of Antioxidants and Omega-3 Fatty Acids in Fresh Lambs by Feeding Rumen-protected Dietary Supplements. Chelsea Jeanjulien¹, Jung Hoon Lee*¹, and Stephan Wildues², ¹*Fort Valley State University, USA*; ²*Virginia State University, USA*

Identification of Angiotensin-converting Enzyme Inhibitory Peptides Resisting Gastrointestinal Digestion from Thermolysin-digested Egg White Hydrolysate. Hongbing Fan*, Jiapei Wang, and Jianping Wu, *University of Alberta, Canada*

Effects of Dietary Scallop Oil Prepared from Scallop By-product on Lipid Metabolism in Type II Diabetic/Obese KK-Ay Mice. Koki Sugimoto*¹, Junpei Nakamura², Ryota Hosomi³, Munehiro Yoshida⁴, and Kenji Fukunaga⁵, ¹*kansai univ, Japan*; ²*Kansai Univ, Japan*; ³*Kansai University, Japan*; ⁴*Kansai Medical University, Japan*; ⁵*Faculty of Chemistry, Materials and Bioengineering, Kansai University, Japan*

Evaluate the Efficacy of γ -glutamyl Peptide in Reducing Hypertension-associated Vascular Inflammation. Snigdha Guha*¹, and Kaustav Majumder², ¹*University of Nebraska, Lincoln, USA*; ²*University of Nebraska, USA*

Dietary n-3 polyunsaturated fatty acid ethyl ester influences the composition of bacteria and their metabolites in rat cecal content. Ryota Hosomi*¹, Anna Matsudo¹, Tadahiro Tsushima², Yoshihisa Misawa², Takaki Shimono³, Seiji Kanda³, Toshimasa Nishiyama³, Munehiro Yoshida³, and Kenji Fukunaga⁴, ¹*Kansai University, Japan*; ²*Bizen Chemical C. Co. Ltd., Japan*; ³*Kansai Medical University, Japan*; ⁴*Faculty of Chemistry, Materials and Bioengineering, Kansai University, Japan*

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.