2019 AOCS Annual Meeting & Expo
May 5–8 America's Center Convention Complex | St. Louis, Missouri, USA

Biotechnology (BIO) Interest Area
Tentative Technical Program

As of March 14, 2019

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

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

Monday Afternoon

BIO 1: Biocatalysis I — Oleochemicals and Novel Bioprocesses
This session is sponsored in part by Malaysian Palm Oil Board, Nisshin OilliO Group, Ltd., and Nitto Pharmaceutical Industries, Ltd.
Chairs: Ching Hou, Retired USDA, USA; and Jun Ogawa, Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto University, Japan

Developing Foods to Address Health Concerns throughout the Lifespan. Kaori Nakajima*, *The Nisshin OilliO Group, Ltd., Japan*

Harnessing the Oil Palm Genome for Enhancing Fatty Acid and Carotenoid Composition. Rajinder Singh*, Eng-Ti Leslie Low, Meilina Ong-Abdullah, Mohd Din Amiruddin, Mohamad Arif Abd Manaf , and Ghulam Kadir Ahmad Parveez, *Malaysian Palm Oil Board, Malaysia*

Production of Palmitoleic Acid-rich Triacylglycerols by Saccharomyces cerevisiae to Control of Skin Microbiome. Toshihiro Nagao*[1], Kazue Narihiro[2], Shimemitsu Tanaka[1], Kazuyoshi Kimura[3], Kazuhiro Yamashita[2], and Yasushi Kamisaka[4], *[1]Osaka Research Institute of Industrial Science and Technology, Japan; [2]YAEGAKI Bio-industry, Inc., Japan; [3]National Institute of Advanced Industrial Science and Technology, Japan; [4]Bioproduction Research Institute, AIST, Japan*

Molecular Breeding and Characterization of an Oleaginous fungus *Mortierella alpina* for a Prostaglandin, $PGF_{2\alpha}$, Production. Jun Ogawa*[1], Mohd Fazli Farida Asras[2], Hideaki Nagano[2], Yoshimi Shimada[2], Miho Takemura[3], Shigenobu Kishino[4], and Akinori Ando[2], *[1]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto University, Japan; [2]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ., Japan; [3]Res. Ins. Biore. Biotech., Ishikawa Pref. Univ., Japan; [4]Kyoto University, Japan*

Co-production of Carotenoids and Polyhydroxyalkanoates by Paracoccus sp. LL1. Beom Soo Kim*[1], Prasun Kumar[2], Won-Gyun Oh[2], and Mehtab Muhammad[2], *[1]Chungbuk National University, Republic of Korea; [2]Chungbuk National University, South Korea*

Gas-to-Lipids Bioprocessing by Acetogens and Thraustochytrids. Charose MT Perez[1], Ran Hirotani[1], Motomu Ishigaki[1], Kenshi Watanabe[1], Yoshiko Okamura[1], Takahisa Tajima[1], Yukihiko Matsumura[1], Yutaka Nakashimada[1], Yusuke Sumita[2], Shinzo Mayuzumi[3], and Tsunehiro Aki*[1], *[1]Hiroshima University, Japan; [2]Chugoku Electric Power, Japan; [3]Idemitsu Kosan, Japan*

Hydrolysis of Raffinose in Complex Soybean Waste by Engineered *P. chlororaphis* as Biocatalyst. Daniel K.Y Solaiman*, Richard D. Ashby, and Nicole V. Crocker, *USDA, ARS, ERRC, USA*

Synthesis of Trimethylolpropane Triester Using an Immobilized Lipase in a Recirculated Packed Bed Reactor. Heejin Kim[1], and In-Hwan Kim*[2], *[1]Dept. of Public Health Sciences, Graduate School, Korea University, Republic of Korea; [2]Korea University, Republic of Korea*

BIO 1.1 / IOP 1: Biopolymers

Chairs: Rongpeng Wang, CVC Thermoset Specialties, USA; and Richard Ashby, USDA, ARS, ERRC, USA

Plant Oil Derived Emulsion Copolymers with Predictable Properties. Meghan E. Lamm*, Ping Li, and Chuanbing Tang, *University of South Carolina, USA*

Corn Oil for Highly Flame Retardant Rigid Polyurethane Foams for Industrial Applications. Camila Zequine, Sanket Bhoyate, Brooks Neria, Pawan Kahol, and Ram Gupta*, *Pittsburg State University, USA*

Rapid Conversion of Oils into Various Monomers and Biopolymers. Aman Ullah*, Muhammad Arshad, Reza Ahmadi, and Liejiang Jin, *University of Alberta, Canada*

Cationic Polymerization of Epoxidized Oils to Cast Resins and Foams. Zoran Petrovic*, and Dragana Radojcic, *Pittsburg State University, USA*

Synthesis, Properties and Structure Function Correlation of Bioplasticizers in PVC. Dharma R. Kodali*, and Lucas J. Stolp, *University of Minnesota, USA*

Synthesis and Characterization of Lipid-based Biopolymers and Bionanocomposites from Poultry Industry By-product. Muhammad Safder*, *University of Alberta, Canada*

Corn Stover and Levulinic Acid: Two Valuable, Renewable Substrates for Biosynthesis of Unique Polyhydroxyalkanoate Biopolymers. Richard D. Ashby*, Daniel K.Y. Solaiman, Gary Strahan, and Alberto Nunez, *USDA, ARS, ERRC, USA*

Microalgae for the Production of Novel Biopolymer Feedstocks. Scott Franklin*[1], Zoran Petrovic[2], Jian Hong[3], Leon Parker[4], Lauren Slutzky[4], Mona Correa[4], Nina P. Reyes[5], Constantine Athanasiadis[4], Jon Wittenberg[4], Estelle Schaefer[6], and Kevin Ward, *[1]Checkerspot, US; [2]Pittsburg State University, USA; [3]Kansas Polymer Research Center, Pittsburg State University, USA; [4]Checkerspot; [5]Checkerspot, Inc., USA; [6]Checkerspot, France*

BIO 1.2a/PRO 1a: Advances in Enzyme Processing Technologies

Chairs: Long Zou, Bunge Oils, USA; and Leslie Kleiner, Roquette Americas Inc., USA

Unique Phospholipase Degumming Enzyme. Michael E. Spampinato*, *DSM Inc., USA*

New Enzymatic Process Improves the Yield in Alkaline Refining of Vegetable Oils. Hans Christian Holm[1], and Per Munk Nielsen*, *Novozymes A/S, Denmark*

Enzyme Assisted Chemical Refining of Vegetable Oils. Sambasivarao Javvadi*, Sandeep Chaudhary, Melkita P. Sequeira, and Archana P. Ashok, *Shirdi Sai Nutraceuticals Pvt. Ltd., India*

Kinetic Modelling of Enzymatic Saccharification of Soy Molasses. Ashwin Sancheti*, and Lu-Kwang Ju, *University of Akron, USA*

Tuesday Morning

BIO 2: Biocatalysis II—Functional Foods and Natural and Derived Oleo-materials
This session is sponsored in part by Nisshin OilliO Group, Ltd., and Nitto Pharmaceutical Industries, Ltd.
Chairs: Lu-Kwang Ju, University of Akron, USA; and Masashi Hosokawa, Hokkaido University, Japan

Restructuring Lipids for Functionality and Health. Casimir C. Akoh*, *University of Georgia, USA*

Improvement in enzymatic enrichment of DHA in algal lipids by thermostable lipase preparation. Yomi Watanabe*[1], Tsunehiro Aki[2], and Araki Masuyama[3], *[1]Osaka Research Institute of Industrial Science and Technology, Japan; [2]Hiroshima University, Japan; [3]Osaka Institute of Technology, Japan*

Interesterification of Palm Based Oils for Specialty Fat Hardstock: Comparison of Enzymatic Catalysis and Chemical Catalysis. Jing Ye[1], Zhen Zhang[2], Ying Li[3], and Yong Wang*[1], *[1]Jinan University, China; [2]South China University of Technology, China; [3]Guangdong Saskatchewan Oilseed Joint Laboratory, Dept. of Food Science and Engineering, Jinan University, China*

Efficient Production of MLCT Oils by Lipase Reactions. Yutaro Kataoka*, Hidetaka Uehara, and Yoshihiro Ueda, *The Nisshin OilliO Group, Ltd., Japan*

Synthesis of triacylglycerol containing hydroxy fatty acids as a constituent fatty acid. Shigenobu Kishino*[1], Daichi Toyama[1], and Jun Ogawa[2], *[1]Kyoto University, Japan; [2]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto University, Japan*

Production of xanthophylls by New Zealand Microalgae and the Sea Urchin Evechinus chloroticus (Kina). Donato Romanazzi*[1], Johnathon Puddick[1], Masashi Hosokawa[2], Matthew R. Miller[3], Michael Packer, Serean Adams[1], Ruihana Paenga [4], and Sarah Bond[5], *[1]Cawthron Institute, New Zealand; [2]Hokkaido University, Japan; [3]Cawthron, New Zealand; [4]Hikiarangi Bioactives Limited , New Zealand; [5]Massey University*

Production of ω3-docosapentaenoic Acid (DPA) by *Aurantiochytrium* sp. T7 Strain. Akinori Ando*[1], Ayami Hatano[2], Tomoyo Okuda[1], Hiroshi Kikukawa[3], Keisuke Matsuyama[4], and Jun Ogawa[5], *[1]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ., Japan; [2]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ., Japan; [3]Gifu university, Japan; [4]NAGASE & CO., LTD., Japan; [5]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto University, Japan*

PUFA Enriched PG Synthesized by PLD-mediated Transphosphatidylation Exerts Anti-inflammatory Effect upon LPS-stimulated RAW264.7 Cells. Liping Chen*[1], Masashi Hosokawa[2], and Kazuo Miyashita[2], *[1]Hokkadio University Faculty of Fisheries Sciences, Japan; [2]Hokkaido University, Japan*

A New Enzymatic Preparation Method for L-α-Glycerylphosphorylcholine for Use as a Food-Grade Cognitive Enhancer. Byung Hee Kim*, *Sookmyung Women's University, Korea*

Roles of Conjugated Linoleic Acids in Oxidation of Vegetable Oils as Functional Lipids. Suk Hoo Yoon*, *Woosuk University, Korea*

Improved Carbohydrase Production by *Aspergillus niger* Fermentation for Soybean Meal Carbohydrate Hydrolysis for use as Fermentation Feedstock. S.M. Mahfuzul Islam*[1], and Lu-Kwang Ju[2], *[1]The University of Akron, USA; [2]University of Akron, USA*

Tuesday Afternoon

BIO 3: Plant and Algae Lipid Biotechnology and Genomics
Chairs: Timothy Durrett, Kansas State University, USA; and Jay Shockey, SRRC-ARS-USDA, USA

Development of Strategies for Modification of Seed Oil Formation. Randall J. Weselake*, *Department of Agricultural, Food and Nutritional Science/University of Alberta, Canada*

The interaction of the soybean seed high oleic acid oil trait with other quality traits. Kristin Bilyeu*, *USDA/ARS, USA*

USDA Approach to Regulating Plant Breeding Innovation. Neil E. Hoffman*, *USDA/APHIS, USA*

Chemical jolt to increase storage lipid in microalgae. Concetta C. DiRusso*, and Nishikant Wase, *University of Nebraska-Lincoln, USA*

Developing Healthier Oils and Other Food Ingredients through Genome Editing. Javier Gil Humanes*, *Calyxt, Inc, USA*

CoverCress – a Novel Oilseed Winter Crop with Canola-like Composition that Helps to Prevent Soil Erosion. Tim Ulmasov*, *CoverCress, USA*

Getting the Most Value Out of Soybeans: A Case for Understanding Resource Partitioning and Allocation Over Seed Development. Shrikaar Kambhampati*[1], Jose A. Aznar-Moreno[2], Jennifer J. Arp[1], Sally K. Bailey[1], Kevin L. Chu[3], Timothy P. Durrett[2], and Doug K. Allen[4], *[1]Donald Danforth Plant Science Center, USA; [2]Kansas State University, USA; [3]Donald Danforth Plant Science Center, USA; [4]Agricultural Research Service, U.S. Department of Agriculture / Donald Danforth Plant Science Center, USA*

Repurposing Carbon in Plant Leaves for Enhanced Agricultural Productivity. Doug K. Allen*[1], Kevin Chu[2], Lauren Jenkins[3], and Shrikaar Kambhampati[2], *[1]Agricultural Research Service, U.S. Department of Agriculture / Donald Danforth Plant Science Center, USA; [2]Donald Danforth Plant Science Center, USA; [3]USDA-ARS, USA*

BIO 3.1 / IOP 3 / PRO 3.1: Biofuels
Chairs: Frank Dumeignil, Lille University, France; Xiaofei P. Ye, University of Tennessee, USA; and Megan Hums, USDA, ARS, ERRC, USA

An Innovative Lipid Extraction Process from Spent Coffee Grounds. Mingming Lu*[1], Yang Liu, and Gerhard Knothe[2], *[1]Univ of Cincinnati, USA; [2]USDA, ARS, NCAUR, USA*

Modulating the Solubility of Saturated Monoglycerides (SMG) and Glycerol (GLY) in Blended Biodiesel Fuels. Richard W. Heiden*[1], and Martin Mittelbach[2], *[1]R.W. Heiden Associates, LLC, USA; [2]Institute of Chemistry, University of Graz, Austria*

Co-production of Acrylic Acid in a Typical Biodiesel Plant: A Techno-Economic Assessment. Xiaofei P. Ye*, *University of Tennessee, USA*

The Use of Controlled Flow Cavitation to Improve the Performance of Degumming, Refining and Biodiesel Operations. Darren J. Litle*, *Arisdyne Systems, Inc., USA*

Wednesday Morning

BIO 4: General Biotechnology: Novel Lipids and Proteins
Chairs: Zheng Guo, Aarhus University, Denmark; and Long Zou, Bunge Oils, USA

"Directed Evolution and New-to-Nature Chemistry" - Experience of Working Together the Nobel Prize Laureate in Chemistry 2018. Zheng Guo*, *Aarhus University, Denmark*

Computational Protein Design. Walter Rakitsky[1], and Alexandre L. Zanghellini*[2], *[1]TerraVia, USA; [2]Arzeda, USA*

Glycol-Functionalized Ionic Liquids for Enzyme Stabilization. Hua Zhao*[1], and Gary A. Baker[2], *[1]University of Northern Colorado, USA; [2]University of Missouri-Columbia, USA*

Development of Novel Enzymes for Trans Fat-Free Oil Conversion Using Recurrent Neural Network-based Structure Prediction. Andres E. Castillo*[1], Richard B. Rubin[2], Juan C. Duarte[1], and Leonardo Alvarez[1], *[1]Protera Biosciences, Chile; [2]Protera Biosciences, USA*

The Next Generation of Immobilized Lipases for Interesterification in Vegetable Oil Processing. Per Munk Nielsen, and Hans Christian Holm*, *Novozymes A/S, Denmark*

Enhancing the Bioaccumulation of Curcumin in Caenorhabditis elegans by Using Nanoemulsion-based Delivery Systems. Ruojie Zhang*[1], Peiyi Shen[2], D. Julian J. McClements[1], and Yeonhwa Park[3], *[1]University of Massachusetts Amherst, USA; [2]University of Massachusetts, USA; [3]Dept. of Food Science, University of Massachusetts Amherst, USA*

Biotechnology Approaches to Convert Sugars into Alka(e)nes: a Review. Jingbo Li*, *MIT, USA*
A New Stable Protease for Medical Instrument Cleaning. Arjan Siebum*[1], Marvanne DeClerck[2], Jenny Newton[2], and Arjen J. Hoekstra[1], *[1]DuPont Industrial Biosciences, The Netherlands; [2]DuPont Industrial Biosciences, USA*

Solvent-Free Enzymatic Synthesis of Glyceryl Monogallate Optimized by Taguchi Method. Siyu Zhang*, and Casimir C. Akoh, *University of Georgia, USA*

Valorization of Fatty Alcohols: Derivatization of Fatty Alcohols into Novel Antioxidant Emulsifiers for Fish Oil Delivery. Sampson Anankanbil*[1], Bianca Perez[2], Weiwei Cheng[3], Gustavo Gouveia, and Zheng Guo[4], *[1]Aarhus University, Department of Engineering, Denmark; [2]Dept. of Engineering, Aarhus University, Denmark; [3]South China University of Technology, China; [4]Aarhus University, Denmark*

Physicochemical Properties of Oleogels Synthesized by Lipase-Catalyzed Interesterification. Heejin Kim*[1], Nakyung Choi[2], No Young Kim[3], Hong-Sik Hwang[4], Byung Hee Kim[5], and In-Hwan Kim[6], *[1]Dept. of Public Health Sciences, Graduate School, Korea University, Republic of Korea; [2]Korea University, South Korea; [3]Korea university, South Korea; [4]USDA, ARS, NCAUR, USA; [5]Sookmyung Women's University, Korea; [6]Korea University, Republic of Korea*

BIO 4.1 / S&D 4: Biosurfactants and Environmentally Friendly Ingredients
Chairs: Sujan Singh, Arkema, USA; and Douglas Hayes, University of Tennessee, USA

Comparative Antimicrobial Efficiency Among C18 and C22 Sophorolipid Congeners towards Select Gram+ Bacterial Strains. Richard D. Ashby*, and Daniel K.Y Solaiman, *USDA, ARS, ERRC, USA*

Fatty Acid, Methyl Ester and Vegetable Oil Ethoxylates. George A. Smith*, *Sasol North America, USA*

How Biosurfactants Can Enable Degreasing. J.R. Bennett, Eric Theiner*, and Stephanie Hackney, *Evonik Corporation, USA*

Biodegradable Dispersants for Phosphate Free Automatic Dishwashing Detergents. Scott A. Backer*[1], Severine S. Ferrieux[2], Eric P. Wasserman[1], Paul P. Mercando[1], Randara Pulukkody[3], Anurima Singh[4], Lin Wang, Ken Laughlin[4], Steve Arturo[4], and Lu Bai[4], *[1]The Dow Chemical Company, USA; [2]The Dow Chemical Company, France; [3]Dow Chemical Company, USA; [4]Dow Chemical*

Beyond the Blindfold – Conquering the Unseen Enemy. Gina P. Sloan*, *Microban International, Ltd., USA*

Aspartic Acid-based Ampholytic Amphiphiles: Synthesis, Characterization, and pH-Dependent Properties at Air/Water and Oil/Water Interface. Weiwei Cheng[1], Sampson Anankanbil[2], Liu Guoqin[3], and Zheng Guo*[4], *[1]South China University of Technology, China; [2]Dept. of Engineering, Aarhus University, Denmark; [3]School of Food Science and Engineering, South China University of Technology, China; [4]Aarhus University, Denmark*

Biobased Surfactants: An Overview. Douglas G. Hayes*, *University of Tennessee, USA*

The Combined Effects of Soap and Sophorolipids in the Development of Mild Body Wash for Sensitive Skin. Glen Lelyn Quan*[1], Chie Matsubara[1], Yoshihiko Hirata[1], Satoshi Yoshida[1], Maiko Iwai[1], Shinji Hamaguchi[1], Etsuko Komiyama[2], and Shigaku Ikeda[2], *[1]Saraya Co., Ltd., Japan; [2]Juntendo University, Japan*

Laundry Sustainability vs. Laundry Sanitization: The Tension and the Solutions. Nancy Falk*, *Clorox, USA*

Optimal Regulation of Oxygenation for Coordination of Rhamnolipid Productivities and Residual Fatty Acid Content in Fermentation of *Pseudomonas aeruginosa*. Qin Meng*, *Zhejiang University, China*

Greener and Milder Functionalized Sugar-Based Surfactants for Home Care and Industrial Applications. Robert J. Coots*[1], Dennis Abbeduto[2], and Andy Sun[3], *[1]Colonial Chemical, USA; [2]Colonial Chemical, Inc., USA; [3]Colonial Chemical, Inc., USA*

Posters will be available for viewing from Monday at 10:00 a.m. until Wednesday at 1:00 pm.

BIO-P: Biotechnology Poster Session
Chairs: Byung Hee Kim, Sookmyung Women's University, Korea; *and Shigenobu Kishino, Kyoto University, Japan*

Absolute Quantification of Acyl-ACPs by Mass Spectrometry. Lauren M. Jenkins*[1], Bradley S. Evans[2], and Doug K. Allen[3], *[1]USDA/Donald Danforth Plant Science Center, USA; [2]Donald Danforth Plant Science Center, United States; [3]Agricultural Research Service, U.S. Department of Agriculture / Donald Danforth Plant Science Center, USA*

Carbon Partitioning in Chlamydomonas reinhardtii under Autotrophic and Mixotrophic Conditions for Growth and Biomass Production. Kevin P. Foley*[1], Zoee Perrine[2], James Umen[2], and Doug K. Allen[3], *[1]Donald Danforth Plant Science Center, United States; [2]Donald Danforth Plant Science Center, United States; [3]Agricultural Research Service, U.S. Department of Agriculture / Donald Danforth Plant Science Center, USA*

Modeling Pulse/Pulse-Chase Radiolabeling to Assess Lipid Metabolism. Doug K. Allen*[1], and Philip Bates[2], *[1]Agricultural Research Service, U.S. Department of Agriculture / Donald Danforth Plant Science Center, USA; [2]Washington State University, United States*

Characterization of Central Carbon Metabolism in High Oil Tobacco Lines Over Development. Kevin L. Chu*[1], Lauren Jenkins[2], Sally K. Bailey[3], Shrikaar Kambhampati[3], Philip Bates[4], and Doug K. Allen[5], *[1]Donald Danforth Plant Science Center, USA; [2]USDA-ARS, United States; [3]Donald Danforth Plant Science Center, United States; [4]Washington State University, United States; [5]Agricultural Research Service, U.S. Department of Agriculture / Donald Danforth Plant Science Center, USA*

CHEMICAL COMPOSITION OF A HUMAN MILK FAT SUBSTITUTE PRODUCED BY ENZIMATIC INTERESTERIFICATION. Roberta Claro da Silva[1], Rafaela Airoldi*[2], Juliana N.R Ract[3], Iván Jachmanián[4], Heather L. Colleran[5], Salam A. Ibrahim, and Luiz A. Gioielli[3], *[1]North Carolina A&T University, United States; [2]Sao Paulo University, Brazil; [3]University of Sao Paulo, Brazil; [4]UdelaR, Uruguay; [5]North Carolina A&T State University, United States*

Specialized Lysophosphatidic Acid Acyltransferases Contribute to Unusual Fatty Acid Accumulation in Exotic Euphorbiaceae Seed Oils. Jay Shockey*, *SRRC-ARS-USDA, USA*

Enhancing acetyl-TAG synthesis through metabolic engineering of the oilseed crop *Camelina sativa*. Timothy P. Durrett*[1], Linah Alkotami[2], and Catherine Kornacki[2], *[1]Kansas State University, USA; [2]Kansas State University, United States*

A New Methodology for the Process Monitoring of Enzymatic Proteolysis by Size-exclusion Chromatography. Sophie Beaubier*[1], Irina Ioannou[1], Xavier Framboisier[2], Olivier Galet[3], and Romain Kapel[2], *[1]LRGP - UMR CNRS 7274, France; [2]Reaction and Process Engineering Laboratory UMR-7274, France; [3]Avril Group, France*

A Methodology to Predict Kinetics of Protein Enzymatic Hydrolysis. Sophie Beaubier*[1], Claire Defaix[1], Xavier Framboisier[2], Olivier Galet[3], and Romain Kapel[2], *[1]LRGP - UMR CNRS 7274, France; [2]Reaction and Process Engineering Laboratory UMR-7274, France; [3]Avril Group, France*

Modification of Alkyl Chain Length Composition of Microalgae Nannochloropsis. Tatsurou Ozaki, Shinji Sugihara*, Mayumi Wada, Akihito Kawahara, Takeshi Saito, and Yasushi Takimura, *Kao corporation, Japan*

Modeling and Optimization of Lipase-Catalyzed Hydrolysis of Phosphatidylcholine Using Response Surface Methodology for L-α-Glycerylphosphorylcholine Production. Yejin Song*[1], Soo Jeong Lee[1], Jung Eun Lee[2], Eunji Choi[2], and Byung Hee Kim[3], *[1]Sookmyung Women's*

University, South Korea; [2]Sookmyung Women's University, Republic of Korea; [3]Sookmyung Women's University, Korea

Characterizing Monosaccharides and Starches in a Co-Culture of Microalgae. Chelsea M. Tyus*, Zhimin Xu, Maria Teresa Gutierrez-Wing, JeeWon Koh, and Joan King, *Louisiana State University, United States*

Solvent Fractionation Method for Preparing Pinolenic Acid Concentrates from Pine Nut Oil Fatty Acids. Min-Yu Chung[1], In-Hwan Kim[2], and Byung Hee Kim*[3], *[1]Korea Food Research Institute, South Korea; [2]Korea University, Republic of Korea; [3]Sookmyung Women's University, Korea*

Preparation of Oleogel from Sunflower Wax and a Vegetable Oil in a Packed Bed Reactor via Lipase-Catalyzed Interesterification. Jihyun Kim*[1], Nakyung Choi[1], Heejin Kim[2], Hong-Sik Hwang[3], Byung Hee Kim[4], Phyrim Lee[5], and In-Hwan Kim[6], *[1]Korea University, South Korea; [2]Dept. of Public Health Sciences, Graduate School, Korea University, Republic of Korea; [3]USDA, ARS, NCAUR, USA; [4]Sookmyung Women's University, Korea; [5]Department of Integrated Biomedical and Life Science, Graduate School, Korea University, South Korea; [6]Korea University, Republic of Korea*

Optimize the Astaxanthin Production Platform by Using Optima Cultural Condition Analysis of Chlorella. sp. DT and the Transgenic Approach. Wei-Tin Lin[1], Yi-Ting Kou[2], Cheng-Huan Liu[2], Wei-Ting Lin[2], and Yu-Ting Chen*[2], *[1]Institute of Genomics and Bioinformatics, National Chung Hsing University, Taiwan; [2]Institute of Genomics and Bioinformatics, National Chung Hsing University, Taiwan*

Human Milk Fat Substitute Produced by Continuous Enzymatic Interesterification: Effect of Different Reaction Parameters. Roberta Claro da Silva[1], Heather L. Colleran[2], Juliana N.R Ract[3], Salam A. Ibrahim, Luiz A. Gioielli[3], and Ezinne C. Chukwu*[2], *[1]North Carolina A&T University, United States; [2]North Carolina A&T State University, United States; [3]University of Sao Paulo, Brazil*

Production of Natural Rubber by Lactuca spp. Tom McKeon*, *Agricultural Research Service, USA*

Polyol Obtained from Liquefaction of Nicotiana tabacum Stalks using PEG – Glycerin Blend. Chiragkumar M. Patel*, *Industrial Chemistry Dept., V. P. & R. P. T. P. Science College, India*

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.