Processing (PRO) Interest Area
Tentative Technical Program

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

Processing 2017 Session Planning Roundtable
Monday, May 2 at 12:30 pm

All meeting attendees are invited to attend Roundtable discussions and assist in developing the technical program for the 2017 AOCS Annual Meeting. AOCS and the Annual Meeting Program Committee greatly value your input! Division membership is not required to participate.

Monday Afternoon

PRO 1: Processing
Chairs: F. Skold, Solex Thermal Science Inc., Canada; and N. Suarez, Richardson Oilseed, Ltd., Canada

- **Enzyme Degumming is More Than More Oil.** T.S. Hitchman¹¹, A. Sein², and W. Smits²,¹ DSM, USA,² DSM, The Netherlands.

- **White Flake Desolventization: Reports from the Field.** R.W. Ozer, Crown Iron Works Co., USA.

- **New Developments on Refining Processing Technologies.** M. Salazar Peña, P.M. Nielsen, H.M. Lilbaek, E.M. Meneguetti, M. Bollinger, and H.C. Holm, Novozymes A/S, Denmark.

- **New Concept in Shallow Bed Extractor.** A.A. Demarco, Desmet Ballestra Group, Argentina.


- **Improving the Bottom Line of Oils and Fats Refining.** K.F. Carlson, RBD Technologies, Inc., USA.

- **Modern Soft Seed Pressing Plant Design.** H.C. Boeck, HF Press+LipidTech, Germany.

- **Increased Efficiency in Enzymatic Degumming with a New Phospholipase.** P.M. Nielsen. Novozymes A/S, Denmark.
Tuesday Morning

PRO 2: Maintenance/Safety/Automation/Plant Training

Chairs: M. Vander Velde, Interstates Construction Services Inc., USA; and J. Glenski, Process Plus LLC, USA

Power Quality and Energy Management for the Process Industries. J.J. Boschuetz, Rockwell Automation, USA, Eaton Corp./Cutler Hammer, USA, University of Wisconsin, USA, Milwaukee School of Engineering, USA, Assn. of Energy Engineers, USA.

Desolventizer/Toaster Temperature Control Optimization Using Model Predictive Control. J. Vortherms, Interstates Control Systems, USA.

Online Training Tools Through the Use of SharePoint: Microbial/Clean Design Standards Training. D.M. McCullough, Process Plus, LLC, USA.


Tuesday Afternoon

PRO 3: By-products

Chairs: A.A. Demarco, Desmet Ballestra Group, Argentina; and S.R. Lewis, Solenis, USA

Extraction, Properties, and Applications of Cruciferin and Napin from Canola Meal. F. Pudel1, R.P. Tressel1, and K. Düring2, 1Pilot Pflanzenöltechnologie Magdeburg e.V., Germany, 2Axara Consulting, Germany.

Biological Salmonellicide. L. Palacios, Molinos Rio de la Plata SA, Argentina.


Deep Extraction and Enzymatic Degumming. L. Palacios, Molinos Rio de la Plata, Argentina.

Dynamic Composition of the Alga Nannochloropsis sp. at Five Geographical Location Sites, with an Emphasis on High-value Omega-3 Fatty Acids as Co-products in a Biofuels Production Process. L.M.L. Laurens1, E.P. Knoshaug1, T.A. Dempster2, P.T. Pienkos1, and J. McGowen2, 1National Renewable Energy Lab., USA, 2Arizona State University, USA.

Antioxidant Activity and Chemical Composition of Extracts from Different Processed Rapeseed Waste Gums. J. Li and Z. Guo, Aarhus University, Denmark.
Wednesday Morning

PRO 4: New Products Technology

Chairs: S.R. Gregory, DSM Food Specialties, USA; and W. Younggreen, Alfa Laval Inc., USA

**Future Directions in Oilseed Processing.** C.L.G. Dayton, Bunge COE, USA.

**A Process Roadmap to Implement Enzyme Degumming.** S.R. Gregory¹, T.S. Hitchman¹, and W. Smits², ¹DSM, USA, ²DSM, The Netherlands.

**Enzyme Degumming Startup Experiences—A Plant Perspective.** F. Pifer, Perdue Agribusiness, USA.

**New Developments in Centrifugation.** R.S. Zeldenrust, GEA Westfalia Separator Group GmbH, Germany.

**Centrifuge Settings and Operation for New Technologies.** W. Younggreen, Alfa Laval Inc., USA.

**Cavitation Technology in Oilseed Processing.** J.E. Willits, Desmet Ballestra North America, USA.

Wednesday Afternoon

PRO 5: General Processing

Chairs: M.S. Alam, Texas A&M University, USA; and R.C. Clough, Texas A&M University, USA

**Extraction of Omega-3-rich Oil from *Camelina sativa* Seed Using Ethanol-modified Supercritical Carbon Dioxide.** H.D. Belayneh¹, R.L. Wehling¹, E. Cahoon², and O.N. Ciftci¹, ¹Dept. of Food Science & Technology, University of Nebraska-Lincoln, USA, ²Center for Plant Science Innovation & Dept. of Biochemistry, University of Nebraska-Lincoln, USA.

**Processing of New Oil and Protein Sources: Zooplankton, Black Soldier Flies, and Grasshoppers.** F. Pudel, G. Fleck, T. Piofczyk, and C. Spangenberg, Pilot Pflanzenöltechnologie Magdeburg e.V., Germany.

**Formation of Hollow Solid Lipid Micro- and Nanospheres to Develop Bioactive Carriers Using a Simple and Green Method.** J. Yang and O.N. Ciftci, University of Nebraska-Lincoln, USA.

**Processing of Defatted Sal (*Shorea robusta*) Meal for Isolation of Antioxidants.** S. Sirisetti, E. Anjaneyulu, B. Dole, and P.P. Chakrabarti*, Indian Inst. of Chemical Technology, CSIR, India.

**Oilseeds Continuous Pressing: Theoretical and Experimental Analyses.** L. Bogaert¹,², H. Mhemdi¹, P. Carre², F. Fine³, A. Quinsac³, and E. Vorobiev¹, ¹UTC/ESCOM, France, ²CREOL, France, ³TERRES INOVIA, France.

**Concentration of Stearidonic Acid from *Echium* Oil by Urea Complexation.** L. Vázquez¹, E. Ortego¹, M. Corzo-Martínez¹, G. Reglero¹,², and C.F. Torres¹, ¹Dept. de Producción y Caracterización de Nuevos Alimentos, Inst. de Investigación en Ciencias de la Alimentación (CSIC–UAM), Universidad Autónoma de Madrid, Spain, ²IMDEA-Food Inst., CEI (UAM-CSIC), Spain.

**Drying Oilseed Meals: Which is the Best Approach?** A.A. Demarco, Desmet Ballestra Group, Argentina.
High Quality Lard with Low Cholesterol Content Produced by Aqueous Enzymatic Extraction and b-cyclodextrin Treatment. Y.F. Liu, J. Jiang, Q.L. Wang, and P.R. Cao, School of Food Science & Technology, Jiangnan University, China.

PRO-P: Processing Poster Session
Chair: N.T. Dunford, Oklahoma State University, USA

Dedicated Poster Viewing
Tuesday, May 3, 5:30–6:30 pm
Authors will be present at their posters during this time.


Effects of Process Parameters on Levels of Fatty Acid Esters of 3-Chloropropane-1,2-diol (3-MCPD) and Glycidol (G) in Palm Olein. V.R.R. Yettella and B. Eapen, AAK USA, Inc., USA.

A Study on Adsorptive Refining of Rapeseed Oil in Pilot-scale System. C.S. Liu, F.H. Huang, W.L. Li, M. Yang, and Q. Zhou, Oil Crops Research Inst., Chinese Academy of Agricultural Sciences, China.


Application of Deep Eutectic Solvent for the Treatment of Free Fatty Acid: A Review. A. Hayyan, C.W. Keat, S.N. Rashid, M.A. Hashim, M. Hayyan, and M.E.S. Mirghani, Dept. of Chemical Engineering, University of Malaya, Malaysia, University of Malaya Centre for Ionic Liquids (UMCiL), University of Malaya, Malaysia, Dept. of Civil Engineering, University of Malaya, Malaysia, Dept. of Biotechnology Engineering, International Inst. for Halal Research & Training (INHART), International Islamic University Malaysia, Malaysia.

Esterification of Free Fatty Acid in Acidic Crude Palm Oil Using (1S)-(+)-10-Camphorsulfonic Acid. A. Hayyan, M.A. Hashim, M.E.S. Mirghani, M. Hayyan, and S.N. Rashid, Dept. of Chemical Engineering, University of Malaya, Malaysia, University of Malaya Centre for Ionic Liquids (UMCiL), University of Malaya, Malaysia, Dept. of Biotechnology Engineering, International Inst. for Halal Research & Training (INHART), International Islamic University Malaysia, Malaysia, Dept. of Civil Engineering, University of Malaya, Malaysia.

Extraction of Sesame Oil from Defatted Sesame Meal Using Supercritical Carbon Dioxide. K. Kim, N.K. Choi, H. Kim, and I.H. Kim, Dept. of Food & Nutrition, Korea University, Republic of Korea, Dept. of Public Health Science, Graduate School, Korea University, Republic of Korea.

Clarification of Wheat-based Distillers’ Solubles and Thin Stillage. K. Ratanapariyanuch, Y.Y. Shim, S. Emami, and M.J.T. Reaney, Dept. of Food & Bioproduct Sciences, University of Saskatchewan, Canada, Dept. of Plant Sciences, University of Saskatchewan, Canada, Guangdong Saskatchewan Oilseed (GUSTO) Joint Lab., Dept. of Food Science & Engineering, Jinan University, China.

Life Cycle Assessment for the Production and Use of Palm Biodiesel. C.W. Puah and Y.M. Choo, Malaysian Palm Oil Board, Malaysia.

Solubility of Tocopherol and Tocotrienols from Palm Oil in Supercritical Carbon Dioxide. C.W. Puah and Y.M. Choo, Malaysian Palm Oil Board, Malaysia.