

## DETAILED SCHEDULE OF PRESENTATIONS

### WEDNESDAY, JUNE 04, OPENING PRESENTATION

8:45 P.M.            **Plant lipid problems.** Andrew A Benson.

### THURSDAY, JUNE 05, MORNING SESSION A (SESSION CHAIR: BASIL NIKOLAU)

- 8:30 A.M.    **A1    Reverse genetic and biochemical characterization of acetyl-CoA metabolism in *Arabidopsis*.** Basil J. Nikolau, Eve Syrkin Wurtele, and David J. Oliver.
- 8:50 A.M.    **A2    An Unprecedented Biosynthetic Pathway: Assembly of Lipoic Acid on its Cognate Enzyme Proteins.** John E. Cronan, Jr , Xin Zhao, and Yanfang Zhang.
- 9:10 A.M.    **A3    Formation of plastidic and cytosolic acetyl-CoA in developing *Brassica napus* seeds.** Joerg Schwender and John Ohlrogge.
- 9:30 A.M.    **A4    Characterization of glucose-6-phosphate dehydrogenase in *Arabidopsis thaliana* and their roles in seed oil accumulation.** Setsuko Wakao and Christoph Benning.

### THURSDAY, JUNE 05, MORNING SESSION B (SESSION CHAIR: JOHN SHANKLIN)

- 10:30 A.M.    **B1    Desaturase Biochemistry: Exploring the Desaturation- Hydroxylation Connection.** John Shanklin, Behnaz Behrouzian, Peter Buist and John Broadwater.
- 10:50 A.M.    **B2    An English Ivy 16:0 $\Delta^4$ -ACP Desaturase is Capable of Introducing a Second Double Bond Into 16- and 18-Carbon Monounsaturated Substrates.** Edward Whittle, Edgar Cahoon and John Shanklin.
- 11:10 A.M.    **B3    A novel family of *Arabidopsis* acyl-lipid desaturases with specificity for palmitic acid.** Ingo Heilmann and John Shanklin.
- 11:30 A.M.    **B4    Enzymology of Fatty Acid Modification: Regioselectivity, Chemoselectivity and Mechanism.** Robert J. Sasata, Devin Polichuk, Darwin W. Reed, Michele C. Loewen, Peter H. Buist, Christopher K. Savile and Patrick S. Covello.
- 11:50 P.M.    **B5    A Novel Fungal Omega-3 ( $\omega$ -3) Desaturase Involved in Eicosapentaenoic Acid (EPA) Production.** Suzette L. Pereira, Emil G. Bobik, Yung-Sheng Huang, and Pradip Mukerji.
- 1:30 P.M.            **Poster Viewing** (even numbered posters)

### THURSDAY, JUNE 05, PLENARY LECTURE

8:00 P.M.            **Biosynthesis, Secretion and Function of Gram-Negative Endotoxin: A Potent Lipid Activator of Innate Immunity.** Christian R. H. Raetz.

### **FRIDAY, JUNE 06, MORNING SESSION C (SESSION CHAIR: ANTHONY HUANG)**

- 8:30 A.M.    **C1**    **Occurrence, structure, and genes of oleosins.** Anthony H.C. Huang.
- 8:50 A.M.    **C2**    **Differential Proteolysis of Oleosins by a Photomodulated, 65-kDa Cytosolic Protease Precedes Oil Body TAG Mobilization During Seed Germination in Sunflower.** Satish C. Bhatla and Hamid R. Sadeghipour.
- 9:10 A.M.    **C3**    **Plant cuticular lipid export requires an ABC transporter.** Lacey Samuels, Laura Balakshin, Jamie Pighin, and Ljerka Kunst.
- 9:30 A.M.    **C4**    **Compartmentation and oil synthesis in seeds.** Stephen Rawsthorne, Marilyn Pike, Olivia Lepri, Xuemin Wu.
- 9:50 A.M.    **C5**    **ER-localized fatty acid desaturases are inserted co-translationally into the organelle and contain different ER retrieval motifs at their carboxy termini.** John M. Dyer, Andrew W. McCartney, Priya Dhanoa, and Robert T. Mullen.

### **FRIDAY, JUNE 06, MORNING SESSION D (SESSION CHAIR: VOLKER MITTENDORF)**

- 10:50 A.M.    **D1**    **Arabidopsis Contains a Large Superfamily Of Acyl-Activating Enzymes. Phylogenetic and Biochemical Analysis Reveals a New Class of Acyl-CoA Synthetases.** Jay Shockey, Martin Fulda, and John Browse.
- 11:10 A.M.    **D2**    **Isolation and characterization of an *Arabidopsis* T-DNA tagged mutant in *ACBP2*.** Girish Mishra, Sathishkumar Ramalingam, M.S.F. Lie Ken Jie and Mee-Len Chye.
- 11:30 A.M.    **D3**    **Gaining insight into the role of the Ser<sup>282</sup> in *B. napus* FAE1 condensing enzyme by site directed mutagenesis studies.** Vesna Katavic , Dennis L. Barton, E. Michael Giblin, Darwin W. Reed, Arvind Kumar and David C. Taylor.
- 11:50 A.M.    **D4**    **Global gene expression profiling using MPSS.** Volker Mittendorf, Rex Tarpey, Garima Bhatt, Karin Shank, Mary Fryczynski, Jermaine Gibson, Amber Shirley, Wing Cheung, Oliver Oswald, Joerg Bauer and Heiko Haertel.
- 1:30 P.M.                    **Poster Viewing** (odd numbered posters)
- 5:00 P.M.                    **Poster Discussions** (even numbered). (**Discussion Leader:** John Browse)

### **FRIDAY, JUNE 06, PLENARY LECTURE**

- 8:00 P.M.                    **How Does Phosphatidic Acid Function as a Signaling Messenger?**  
Xuemin Wang, Wenhua Zhang, and Ruth Welti.

**SATURDAY, JUNE 07, MORNING SESSION E (SESSION CHAIR: JOHN HARWOOD)**

- 8:50 A.M.    **E1**    **A Peroxisome Deficient Mutant Exhibits Reduced Rates of fatty Acid Synthesis and Pleiotropic Developmental Defects.** Yun Lin and Howard M. Goodman.
- 9:10 A.M.    **E2**    **Glycerol-3-phosphate is a regulatory metabolite modulating the metabolic flux between the prokaryotic and eukaryotic glycerolipid pathways in *Arabidopsis*.** Jitao Zou, Wenyun Shen, Cyril Periappuram, Melanie Dauk.
- 9:30 A.M.    **E3**    **Multifunctional acetyl-CoA carboxylase 1 is essential for very long chain fatty acid elongation and embryo development in *Arabidopsis*.** Sébastien Baud, Virginie Guyon, Jocelyne Kronenberger, Sylvie Wuillème, Martine Miquel, Michel Caboche, Loïc Lepiniec and Christine Rochat.
- 9:50 A.M.    **E4**    **Gene identification of a MGlcDG synthase from non-annotated genes by comparative genomic analysis of two types of cyanobacteria.** Koichiro Awai, Chie Kawabata-Awai, Takakazu Kaneko, Takatoshi Kakimoto, Miki Hagio, Hajime Wada and Hiroyuki Ohta.

**SATURDAY, JUNE 07, MORNING SESSION F (SESSION CHAIR: JOHN HARWOOD)**

- 10:45 A.M.    **F1**    **Genetic Manipulation of Wheat Lipase Activity to Improve Flour.** John L. Harwood, Duncan A.N. Edlin, Chris M. Saunders, Huw D. Jones and Peter Kille.
- 11:05 A.M.    **F2**    **GDSL-LIPASE-LIKE PROTEINS IN THE STIGMAS OF SOLANACEOUS PLANTS.** Fred Beisson, Katrin Fischer, Mike Pollard, Jan Jaworski and John Ohlrogge.
- 11:25 A.M.    **F3**    **Triacylglycerols of Pilinut (*Canarium ovatum Engl.*) and Coconut (*Cocos nucifera L.*) and their Enzymatic Modification for Specialty Fats and Oils Production.** Laura J. Pham and Precy M. Rasco,
- 11:45 A.M.    **F4**    **Functional Identification of an *Arabidopsis thaliana* N-Acylethanolamine Amidohydrolase.** Kent D. Chapman, Rhidaya Shrestha, and Richard A. Dixon.
- 5:00 P.M.                    **Poster Discussions** (odd numbered). (**Discussion Leader:** Jan Jaworski)

**SATURDAY, JUNE 07, PLENARY LECTURE**

- 8:00 P.M.                    **Genetic, Molecular and Biochemical Analyses of the Cuticular Wax Biosynthetic Pathway.** PATRICK S. SCHNABLE, CHARLES R. DIETRICH, ANN M. PERERA, BASIL J. NIKOLAU.

## POSTER PRESENTATIONS

- P1 Thermotropic behaviour of glyco- and phospholipids of marine brown alga *Sargassum pallidum*.** Svetlana N. Goncharova, Nina M. Sanina and Eduard Y. Kostetsky.
- P2 Diacylglycerol is a preferred substrate for triacylglycerol synthesis in *Vernonia galamensis* and *Stokesia laevis* developing seeds.** Keshun Yu, Charles T. McCracken, Jr. and David F. Hildebrand.
- P3 Comparative characteristics of fatty acid composition of glyco-, phospho- and betain lipids from marine macrophytes.** Nina Sanina, Svetlana Goncharova and Eduard Kostetsky.
- P4 Elevation of seed alpha-tocopherol levels using plant-based transcription factors targeted to an endogenous locus.** Charlene Levering, Alison L. Van Eenennaam, Guofu Li, Mylavaram Venkatramesh, Xiaosong Gong, Christine K. Shewmaker, and Casey C. Case.
- P5 Antisense suppression of PLD $\alpha$  gene expression and reduced PLD $\alpha$  enzyme activity in transgenic tomato fruit.** Bruce D. Whitaker.
- P6 Lipase-catalyzed synthesis of 1,2(2,3)-diricinolein.** Charlotta Turner, Tasha Nguyen, Jiann-Tsyh Lin, Rosalind Wong, Robert Lundin, Leslie Harden and Thomas McKeon.
- P7 Non-bilayer prone lipids in the molecular mechanism of the xanthophyll cycle.** Dariusz LATOWSKI, Hans-Erik ÅKERLUND, Kazimierz STRZAŁKA.
- P8 The function of castor diacylglycerol acyltransferase.** Xiaohua He, Jiann Tsyh Lin, Grace Q. Chen, Charlotta Turner and Thomas A. McKeon.
- P9 Mitochondrial  $\beta$ -oxidation in early pea seed development I. Switching from starch to lipid degradation.** Clifford Wood and Christine Masterson.
- P10 A  $\Delta^4$ -fatty acyl desaturase from *Euglena gracilis*.** Astrid Meyer, Petra Cirpus, Ulrich Zähringer and Ernst Heinz.
- P11 Mitochondrial  $\beta$ -oxidation in early pea seed development II. Consequences of inhibiting  $\beta$ -oxidation.** Christine Masterson and Clifford Wood.
- P12 Studies on GPAT (Glycerol 3-phosphate acyltransferase) genes in the yeast *Saccharomyces cerevisiae*.** Andrea C. Neal, Marit Lenman, Antoni Banas, Anders Dahlqvist, Hans Ronne, Sten Szymne, and Ulf Ståhl.
- P13 Molecular and genetic characterization of the two paralogous genes coding for the BCCP subunit of the heteromeric acetyl-CoA carboxylase of *Arabidopsis*.** Xu Li, Hilal Ilarslan, Li Ling, Eve Syrkin Wurtele, and Basil J. Nikolau.

- P14 PDAT and PDAT-like enzymes in plants.** Sten Stymne, Antoni Banas, Anders Carlsson, Ulf Ståhl and Marit Lenman.
- P15 Different roles of phospholipase D $\alpha$  and  $\delta$  in freezing responses in *Arabidopsis thaliana*.** Weiqi Li, Maoyin Li, Ruth Welti, and Xuemin Wang.
- P16 Seed Development in *Ricinus communis*: Expression of Ricin and Agglutinin Genes.** Grace Q. Chen, Xiaohua He, Thomas A. McKeon.
- P17 A Study on the Triglyceride Molecular Species of Okra (*Hibiscus esculentus* L.) Seed Oil.** Patrisha J. Pham and Milagros M. Peralta.
- P18 A *fab1* suppressor mutant shows increased tolerance to low temperatures.** Lenore Barkan, Vijayan Perumal, Anders S. Carlsson, and John Browse.
- P19 Reconstitution of the maize fatty acyl-CoA elongase system in *Saccharomyces cerevisiae*.** M. Ann D.N. Perera, Charles R. Dietrich, Karsten Frenzel, Udo Wienand, Patrick S. Schnable, Basil J. Nikolau.
- P20 Building a Quantitative Model of Oilseed Metabolism.** Jörg Schwender, Sari Ruuska, Yair Shachar-Hill, Mike Pollard, John Ohlrogge.
- P21 Manipulating lipid content in potato tubers.** Dörte Klaus and Peter Dörmann.
- P22 Isolation and Characterization of a Phospholipid : 1,2-Diacylglycerol Acyltransferase Knockout Line in *Arabidopsis thaliana*.** Vandana Mhaske, John B. Ohlrogge and Mike Pollard.
- P23 Isolation of a FAD2 Desaturase Homolog from a Basidiomycete.** Robert E. Minto.
- P24 DIACYLGLYCEROL ACETYLTRANSFERASE ACTIVITY AND *IN VIVO* ACETYL-COENZYME A POOLS IN DEVELOPING *EUONYMUS ALATUS* SEEDS.** Ajay W. Tumaney, Troy Paddock, John B. Ohlrogge and Mike Pollard.
- P25 Fungal Responsive Fatty Acid Acetylenases Occur Widely in Evolutionarily Distant Plant Families.** Robert E. Minto, Judy A. Schnurr, Errol A. Huffman and Edgar B. Cahoon.
- P26 THE STRUCTURE AND BIOSYNTHESIS OF THE LIPID POLYESTERS IN STIGMA EXUDATES OF TOBACCO AND PETUNIA.** Guiyun Wang, Younghee Cho, Joe Keifer, John Ohlrogge and Mike Pollard.
- P27 Characterization of maize *gl8* genes reveals that 3-ketoacyl reductase activity is essential for normal maize development.** Charles R. Dietrich, Ann M. Perera, Robert B. Meeley, Basil J. Nikolau and Patrick S. Schnable.

- P28 Arabidopsis 3-Ketoacyl-CoA Synthases.** Brenda Blacklock and Jan Jaworski.
- P29 Elongation of hydroxylated fatty acids.** Owen Rowland, Mark A. Smith, Gangamma Chowrira, and Ljerka Kunst.
- P30 Construction of a full-length cDNA library from developing castor bean.** Chaofu Lu, Martin Fulda, Jim Wallis and John Browse.
- P31 Analysis of hydroxy fatty acid production in transgenic *Arabidopsis* and yeast.** Mark Smith, Gangamma Chowrira and Ljerka Kunst.
- P32 Metabolic Impact of Elevated Plastidial Acetyl-CoA Carboxylase Activity in Developing Embryos of *Brassica napus*.** Deborah J. Hawkins, Cathie Kirschke, Allen Van Deyzne, Toni Voelker and Thomas J. Savage.
- P33 Sterol-controlled overexpression of ATP citrate lyase in Arabidopsis.** Elizabeth K. Winters, Basil J. Nikolau, and Eve Syrkin Wurtele.
- P34 Cloning of *Limnanthes*  $\Delta^5$ -desaturase Gene Involved in 20:1 <sup>$\Delta^5$</sup>  and 22:2 <sup>$\Delta^5, \Delta^{13}$</sup>  Biosynthesis and Its Expression in Somatic Soybean Embryos and *Brassica carinata*.** Ashok Jadhav, Elizabeth-France Marillia, Anthony J. Kinney and David C. Taylor.