S1 P1 Oil extraction without oxygen.
Fleck, Gunther. Pilot Pflanzenöltechnologie Magdeburg e.V., Berliner Chaussee 66, 39114 Magdeburg, Germany.

S1 P2 Fatty acid composition of various plant species randomly sampled on contaminated soils can be used to attribute them a "quality bio-value".
M. Le Guédard, A. Alaphilippe, T. Beguiristain, F. Douay, O. Faure, A. Hitmi, S. Houot, M. Legras, J.-F. Vian, A. Bispo, C. Grand, G. Peres and J.-J. Bessoule. LEB Aquitaine Transfert - ADERA / Laboratoire de Biogenèse Membranaire - UMR 5200 - CNRS - INRA Bordeaux Aquitaine, 71 avenue Edouard Bourlaux, 33883 Villenave D'Ornon cedex, France.

S2 P1 Increasing the accumulation of medium chain fatty acids in transgenic plants.
Henrik Tjellström*, Merissa Strawsine and John Ohlrogge. Department of Plant Biology, Michigan State University, East Lansing, MI, USA.

S2 P2 Cloning and molecular characterization of ß-hydroxiacyl-ACP dehydratase genes from *Helianthus annuus* L.
Irene González-Thuillier[1], Mónica Venegas-Calerón[1], Penny von Wettstein-Knowles[2], Rafael Garcés[1] and Enrique Martínez-Force[1].[1] Group of Genetics and Biochemistry of Seed Lipids. Instituto de la Grasa. CSIC. Avda. Padre García Tejero, 4. 41012-Seville. SPAIN.[2] Biology Department, Copenhagen University, Ole Maaloees Vej 5, 2200-Copenhagen N, Denmark.

S2 P3 A new metabolic pathway engineering to produce the branched-chain fatty acids in *Saccharomyces cerevisiae*.
Thi Mai Huong To[1], Elie Elkassis[1], Frédérique Beaudoin[2] and Brigitte Thomasset[1].[1] Laboratoire Génie Enzymatique et Cellulaire - UMR CNRS 6022, Université de Technologie de Compiègne, France.[2] Rothamsted Research, West Common, Harpenden, Hertfordshire, AL5 2JQ, UK.

S2 P4 Dissection of *Dictyostelium discoideum* fatty acid biosynthesis by tracking of isotopically-labeled metabolites.
Birch, G.L., Minto, R.E., and Blacklock, B.J. Department of Chemistry and Chemical Biology, Indiana University Purdue University – Indianapolis, Indianapolis, IN 46202, USA.

S2 P5 Cloning and biochemical characterization of two long chain acyl-CoA synthetases from sunflower (*Helianthus annuus* L.)
Jose A. Aznar-Moreno[1], Mónica Venegas-Calerón[1], Joaquín J. Salas[1], Robert T. Mullen[2], Rafael Garcés[1] and Enrique Martínez-Force[1].[1] Group of Genetics and Biochemistry of Seed Lipids, Department of Physiology and Technology of Plant Products, Instituto de la Grasa (CSIC), Avda. Padre García Tejero 4, 41012-Seville, Spain.[2] Department of Molecular and Cellular Biology, University of Guelph, Guelph, ON, Canada.

S2 P6 Amino acids important for chain-length substrate specificities of Arabidopsis alcohol-forming fatty acyl reductases FAR5 and FAR8.
Micaela G. Chacon[1], Ashley E. Fournier[1], Frédéric Domergue[2], and Owen Rowland[1].[1] Department of Biology and Institute of Biochemistry, Carleton University, Ottawa, Ontario, Canada, K1S 5B6.[2] Laboratoire de Biogenèse Membranaire, Université Victor Ségalen Bordeaux 2, CNRS-UMR 5200, 146 rue Léo Saignat, Case 92, 33076 Bordeaux Cedex, France.

S2 P7 Dissecting the role of very long chain fatty acids in Arabidopsis growth and development.
Seamons, L. Haslam, R. Bennett, M. Napier, J. and Beaudoin, F. Rothamsted Research, Harpenden, Hertfordshire, United Kingdom.

S2 P8 Acyl chain biosynthesis for the alkamides of *Echinacea purpurea*.
Michael R. Shepard[1], Harry W. Scott[1], Ngun Nawlthang[1], Basil J. Nikolau[2] and Robert E. Minto[1].[1] Department of Chemistry and Chemical Biology, Indiana University Purdue University – Indianapolis, Indianapolis, IN 46202, USA.[2] Department of Biochemistry, Biophysics & Molecular Biology, Iowa State University, Ames, IA 50011, USA.

S2 P9 Why do plants make unusual fatty acids? Exploring the curious cases of acetylenic and conjugated fatty acids.
Peng Wang, Xiangjun Li, and Edgar B. Cahoon. Center for Plant Science Innovation and Department of Biochemistry, University of Nebraska-Lincoln, Lincoln, Nebraska 68588, USA.

S2 P10 The multigene family of lysophosphatidate acyltransferase (LPAT)-related enzymes in *Ricinus communis*. Cloning and molecular characterization of two LPAT genes expressed in the castor bean.
Arroyo-Caro, J.M.[1], Chileh, T.[1], Kazachkov M.[2], Zou J.[2], López Alonso D.[1] and García-Maroto F.[1].[1] Biotechnology of Natural Products Group, University of Almería, 04120-Almería, Spain.[2] Plant Biotechnology Institute, National Research Council, S7N OW9-Saskatoon, Canada.

S2 P11 Refined isotopomer labeling analysis of lipid-linked epimerization and desaturation of glyceroglycolipids in cyanobacteria.
Sato, N. (1,2), Okazaki, Y.[3] and Saito, K. (3,4).[1] University of Tokyo, 153-8902 Tokyo, Japan.[2] JST, CREST, Tokyo, 102-0076 Japan.[3] RIKEN Plant Science Center, Yokohama, 230-0045 Japan.[4] Chiba University, Chiba, 263-8522 Japan.

S2 P12 Localization of plastidial AtFAD6 and AtFAD7 desaturases in the chloroplast envelope from Arabidopsis.
Lagunas B., Picorel R. and Alfonso M. EEAD-CSIC Department of Plant Nutrition, Avda. Montañana, 1005, 50059, Zaragoza, Spain.

S2 P13 Differential contribution of the microsomal and plastidial linoleate desaturases to the α-linolenic acid content in olive oil.
Hernández, M.L., Sicardo, M.D. and Martínez-Rivas, J.M. Department of Physiology and Technology of Plant Products, Instituto de la Grasa (IG-CSIC), 41012 Sevilla, Spain.

S2 P14 Molecular characterization and functional analysis of four *FAD2* genes from *Brassica napus* L.
Kyeong-Ryeol Lee[1], Young Sam Go[2], Jin Hee Jung[2], Jong-Bum Kim[1], Kyung Hee Roh[1], Mi Chung Suh[2] and Hyun Uk Kim[1].[1] Department of Agricultural Bio-resources, National Academy of Agricultural Science, Rural Development Administration, Suwon 441-707, Republic of Korea.[2] Department of Bioenergy Science and Technology, Chonnam National University, Gwangju 500-575, Republic of Korea.

S2 P15 Functionality of the soybean microsomal omega-3 desaturases *GmFAD3A*, *GmFAD3A-T*, *GmFAD3B* and *GmFAD3C* examined by heterologous expression in yeast.
Ángela Román (1,2), María Luisa Hernández[2], Rafael Picorel[1], José Manuel Martínez-Rivas[2] and Miguel Alfonso[1].[1] Department of Plant Nutrition, Estación Experimental de Aula Dei (EEAD-CSIC). Avda. Montañana 1005, 50059 Zaragoza, Spain.[2] Department of Physiology and Technology of Plant Products, Instituto de la Grasa (IG-CSIC). Avda. Padre García Tejero 4, 41012 Sevilla, Spain.

S2 P16 Functional analysis of a delta 6-desaturase gene from the spike eel (*Muraenesox cinereusa*).
Kim, J.-B.[1], Roh, K.-H.[1], Kim, S.-H.[1], Kim, H.U., Lee, K.-R.[1], Lee, E.-Y.[1], Park, J.-S.[1], Kim,J.-B.[1] and Kim, K.-S.[2].[1] National Academy of Agricultural Science, Rural Development Administration, Korea.[2] National Institute of Crop Science, Rural Development Administration, Korea.

S2 P17 *LEAFY COTYLEDON1* regulates the ω-3 polyunsaturated fatty acid content of Arabidopsis seed oil by [LEC1-LIKE:NF-YC2:bZIP67]-directed transactivation of FATTY ACID DESATURASE3.
Mendes A., Kelly AA., Shaw E., Kurup S. and Eastmond P.J. Rothamsted Research, Harpenden, AL5 2JQ, UK.

S2 P18 Developmental and temperature regulation of omega-3 fatty acid desaturases from soybean.
Lagunas B., Roman A., Andreu V., Picorel R. and Alfonso M. Department of Plant Nutrition, Est. Exp. "Aula Dei", EEAD-CSIC, Avda. Montañana 1005, Zaragoza, Spain.

S2 P19 How does lipid desaturation affect the architecture of photosynthetic apparatus?
Ildikó Domonkos[1], Svetla J. Todinova[2], Hajnalka Laczkó-Dobos[1], Anelia G. Dobrikova[2], Mihály Kis[1], Emilia L. Apostolova[2] and Zoltán Gombos[1].[1] Institute of Plant Biology, Biological Research Centre of the Hungarian Academy of Sciences, H-6701 Szeged, P.O. Box 521, Hungary.[2] Institute of Biophysics and Biomedical Engineering, Bulgarian Academy of Sciences, Sofia, 1113, Bulgaria.

S2 P20 Morphological changes and fatty acid characterization of *Camelina sativa* developing seeds.
Rodríguez-Rodríguez M.F., Sánchez-García A., Venegas-Calerón M., Salas J.J., Garcés R. and Martínez-Force E. Instituto de la Grasa, Consejo Superior de Investigaciones Científicas (CSIC), Avenida Padre García Tejero 4, 41012-Sevilla, Spain.

S3 P1 Metabolic interactions in the functions of plastids isolated from soybean somatic embryos.
Sparace, Salvatore A., Clark, Karen R., He,Yan, Young, Tammie E., Li, Zhigang, Luo, Hong, Kleppinger-Sparace and Kathryn F. Clemson University, Biological Sciences Department and Genetics and Biochemistry Department, Clemson, South Carolina 29634, USA.

S3 P2 Cloning, heterologous expression and biochemical characterization of plastidial *sn*-glycerol-3-phosphate acyltransferase from *Helianthus annuus*.
Payá-Milans M., Venegas-Calerón M., Salas J.J., Garcés R. and Martínez-Force E. GGBLS, Department of Physiology and Technology of Plant Products, Instituto de la Grasa (CSIC), Avda. Padre García Tejero 4, 41012-Seville, Spain.

S3 P3 Analysis of the contribution of the patatin-like protein pPLAIIa to progressive drought stress in Arabidopsis using silenced and overexpressing plants.
Inês Vieira da Silva, Anabela Bernardes da Silva, André Alcântara, Jorge Marques da Silva, João Daniel Arrabaça and Ana Rita Matos. Plant Molecular Biology and Biotechnology, Center for Biodiversity, Functional and Integrative Genomics, Plant Biology Department, University of Lisbon, Campo Grande, 1749-016 Lisbon, Portugal.

S3 P4 Biosynthesis of phosphatidylglycerol is essential for the development of thylakoid membranes.
Tanoue, R. Kobayashi, M. Katayama, K. Nagata, N. and Wada, H. The University of Tokyo, 3-8-1 Komaba, Meguro-ku, Tokyo, Japan.

S4 P1 Agroinfiltration of *Nicotiana benthamiana*, an efficient system for evaluation of candidate genes for short and medium chain triacylglycerol synthesis.
Mariette Andersson*[1], Jillian Collins Silva[2], Umid Iskandarov[2], Per Hofvander[1], Rebecca Cahoon[2], Edgar Cahoon[2] and Sten Stymne[1].[1] Department of Plant Breeding and Biotechnology, Swedish University of Agricultural science, Box 101, SE-23053 Alnarp, Sweden.[2] Center for Plant Science Innovation and Department of Biochemistry, University of Nebraska-Lincoln, Lincoln, NE 68588, USA.

S4 P2 Molecular characterization of lipase gene
Glaied Imen,Belguith Hatem,Fattouch Sami and Ben Hamida Jeannette.[1]UR « Protéomie fonctionnelle et biopréservation alimentaire (ISSBAT); 9 Rue Zouhair Essafi 1006 Tunis.[2] Institut National des Sciences Appliquées et de Technologie (INSAT).

S4 P3 Lysophosphatidylcholine acyltransferase 2 (LPCAT2) is responsible for assisting in PDAT1-catalyzed TAG synthesis in Arabidopsis.
Anders S Carlsson[1], Jingyu Xu[2], Tammy Francis[2], Meng Zhang[3], Travis Hoffman[2] and David C Taylor (2,4).[1] Plant Breeding and Biotechnology, Swedish University of Agricultural Sciences, Box 101, Sundsvägen 14, 230 53 Alnarp, Sweden.[2] National Research Council of Canada, Plant Biotechnology Institute, 110 Gymnasium Place, Saskatoon, SK S7N 0W9, Canada.[3] College of Agronomy, Northwest A & F University, No.3 Taicheng Road, Yangling, Shanxi 712100, China.[4] NRC Plant Biotechnology Institute, 110 Gymnasium Place, Saskatoon, SK S7N 0W9, Canada.

S4 P4 Involvement of a caleosin in storage lipid biosynthesis and mobilization during olive (*Olea europaea* L.) pollen development.
Krzysztof Zienkiewicz, Agnieszka Zienkiewicz, Juan de Dios Alché, Cynthia Suárez, María Isabel Rodríguez-García and Antonio Jesús Castro. Department of Biochemistry, Cell and Molecular Biology of Plants, Estación Experimental del Zaidín, Consejo Superior de Investigaciones Científicas (CSIC), Profesor Albareda 1, 18008, Granada, Spain.

S4 P5 Transparent testa 16 plays multiple roles in plant development and is involved in seed oil biosynthesis in *Brassica napus*.
Chen, G. Deng, W. Peng, F. Truksa, M. Snyder, C.L. and Weselake R.J. Alberta Innovates Phytola Centre, Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB T6G 2P5 Canada.

S4 P6 Production of Wax Esters by FAR-WS fusion proteins.
Dittrich-Domergue F., Joubès J., Thoraval D., Fouillen L., Lessire R. and Domergue F. Laboratoire de Biogenèse Membranaire - CNRS UMR 5200 - Univ. Bordeaux Ségalen, Bordeaux, FRANCE.

S4 P7 Regulatory mechanisms underlying oil palm mesocarp maturation and functional specialization in lipid and carotenoid metabolism.
Dussert S*, Tranbarger TJ, Joët T and Morcillo F. UMR Diade, IRD and Cirad, Montpellier, France.

S4 P8 Studying the genetic control of seed oil content and composition using the Arabidopsis 'MAGIC' population.
Kelly A.A.[1], Craddock C.[1], Adams N.[1], Belfield E.[2], Harberd N.[2], Welham S.[1], Kurup S.[1] and Eastmond P.J.[1]. Rothamsted Research, Harpenden, AL5 2JQ, UK.[2] University of Oxford, Department of Plant Sciences, Oxford, OX1 3RB, UK.

S4 P9 Arabidopsis CGI-58 interacts with the peroxisomal transport protein PXA1.
Gidda S.K.[1], Park S.[2], James C.N.[3], Horn P.J.[3], Khuu N.[1], Seay D.C. (2,4), Keereetaweep J.[3], Chapman K.D.[3], Dyer J.M.[2] and Mullen R.T.[1].[1] Department of Molecular and Cellular Biology, University of Guelph, Guelph, ON, Canada N1G.[2] W12United States Department of Agriculture-Agricultural Research Service, US Arid-Land Agricultural Research Center, Maricopa, AZ 85138, USA.[3]Department of Biological Sciences, Center for Plant Lipid Research, University of North Texas, Denton, TX 76203, USA.[4] Department of Natural Sciences, Del Mar College, Corpus Christi, TX 78404, USA.

S4 P10 Oil accumulation in stem tissues of aspen (*Populus tremula*) is induced by short day treatment.
Åsa Grimberg[1], Nathaniel Street[2] and Rishikesh Bhalerao[3].[1] Swedish University of Agricultural Sciences, Department of Plant Breeding and Biotechnology, Alnarp, Sweden.[2] Umeå University, Department of Plant Physiology, Umeå, Sweden.[3] Umeå Plant Science Centre, Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, Umeå, Sweden.

S4 P11 WRI1 homologs from non-embryonic storage tissues of aspen, oat, and nutsedge induce a massive increase of oil in tobacco leaves.
Åsa Grimberg, Per Hofvander and Anders Carlsson. Swedish University of Agricultural Sciences, Department of Plant Breeding and Biotechnology, Alnarp, Sweden.

S4 P12 Comparative transcriptome analysis of two oil accumulating tissues from olive fruit.
Hernández M.L.[1], Muñoz-Mérida A.[2], Sicardo M.D.[1], Trelles O.[2], Valpuesta V.[3] and Martínez-Rivas J.M.[1]. [1] Department of Physiology and Technology of Plant Products, Instituto de la Grasa (IG-CSIC), 41012 Sevilla, Spain. [2] Integrated Bioinformatics, National Institute of Bioinformatics, University of Málaga, 29071 Málaga, Spain. [3] Department of Molecular Biology and Biochemistry, Instituto de Hortofruticultura Subtropical y Mediterránea, University of Málaga (IHSM-UMA-CSIC), 29071 Málaga, Spain.

S4 P13 Biochemical characterization of substrate specificity of lipases from germinating seeds of jojoba (*Simmondsia chinensis*).
Kawinski, A., Miklaszewska, M. and Banas, A. Laboratory of Plant Biochemistry, Intercollegiate Faculty of Biotechnology UG-MUG, ul. Kladki 24, 80-822 Gdansk.

S4 P14 Senescence-inducible LEC2 differently modulates genes involved in fatty acid and triacylglycerol synthesis to accumulate TAG in Arabidopsis leaf.
Hyun Uk Kim[1], Kyeong-Ryeol Lee[1], Hyun A Shin[1], Young Sam Go[2], Mi-Chung Suh[2] and Jong Bum Kim[1]. [1] Department of Agricultural Biotechnology, National Academy of Agricultural Science, Rural Development Administration, Suwon 441-707, Republic of Korea. [2] Department of Bioenergy Science and Technology, Chonnam National University, Gwangju 500-757, Republic of Korea.

S4 P15 Protein structure modeling, expression patterns, subcellular localization, and enzymatic analysis of monoacylglycerol lipase (MAGL) gene family in *Arabidopsis thaliana*.
Ryeo Jin Kim[1], Hae Jin Kim[1], Hyo Jin Kim[1], Donghwan Shim[2], John E. Carlson[2] and Mi Chung Suh[1]. [1] Department of Bioenergy Science and Technology, Chonnam National University, Gwangju 500-757, Republic of Korea. [2] The Schatz Center for Tree Molecular Genetics, The School of Forest Resources, Pennsylvania State University, University Park, PA 16802, USA.

S4 P16 SUCROSE TRANSPORTER 5 supplies Arabidopsis embryos with biotin and affects triacylglycerol accumulation.
Benjamin Pommerrenig[1], Sylwia Schulmeister[1], Jennifer Popko[2], Ivo Feussner[2], Anne-Christina Herwig[3], Laurent Marty[3] and Norbert Sauer[1]. [1] Molecular Plant Physiology FAU Erlangen-Nürnberg, Staudtstrasse 5, D-91058 Erlangen, Germany. [2] Albrecht-von-Haller-Institute for Plant Science, Justus-von-Liebig-Weg 11, D-37077 Göttingen, Germany. [3] BASF Plant Science Company GmbH, D-67117 Limburgerhof, Germany.

S4 P17 Exploring the diversity of triacylglycerol-estolides in seed oils using MALDI-TOF mass spectrometry.
Haixia Zhang, Randy Purves and Mark Smith. National Research Council Canada. Plant Biotechnology Institute. 110 Gymnasium Place. Saskatoon. SK. S7N 0W9, Canada.

S5 P1 The tomato (*S. lycopersicum*) GDSL-lipase SlGDSL1 is required for cutin deposition in fruit cuticle.
Bakan, B.[1], Girard, A-L.[1], Mounet, F.[1], Lemaire-Chamley, M.[2], Rothan, C.[2] and Marion, D[1]. [1] Institut National de la Recherche Agronomique, Biopolymers, interactions, assemblies Research Unit, La Géraudière BP71627 Nantes 44316 cedex 3, France. [2] UMR Fruit biology, 71 avenue Edouard Bourlaux, 33883 Villenave d'Ornon, Bordeaux, France.

S5 P2 Bifunctional wax ester synthases in *Arabidopsis thaliana*.
Veronika Behnen, Felix Lippold and Peter Dörmann. Institute of Molecular Physiology and Biotechnology of Plants (IMBIO), University of Bonn, Karlrobert-Kreiten-Strasse 13, 53115 Bonn, Germany.

S5 P3 The feruloyl transferase FHT: cellular localization and potato tuber development and maturation.
Pau Boher, Olga Serra, Mercè Figueras and Marisa Molinas. Cork Laboratory, University of Girona, E-17071, Girona, Spain.

S5 P4 Secretion of wax and cell wall components share common components in *Arabidopsis thaliana*.
Lin Shi, Gillian Dean, Huanquan Zheng[1], George Haughn and Ljerka Kunst. University of British Columbia, Vancouver, Canada.[1] Present address: McGill University, Montreal, Canada.

S5 P5 Phenotypic changes in knockout mutants of lipid transfer proteins in Arabidopsis thaliana.
Edstam, MM and Edqvist, J. Linköping University, Linköping, Sweden.

S5 P6 The role of *OsABCG31* in the formation of the epidermal extracellular matrix in rice.
Imène Garroum and Christiane Nawrath. Department of Plant Molecular Biology, University of Lausanne, CH-1015 Lausanne, Switzerland.

S5 P7 The Arabidopsis *cer26* mutant is specifically affected in VLCFA elongation process.
Joubès J., Pascal S., Bernard A., Sorel M., Haslam R.P., Napier J.A., Domergue F. and Lessire R. Laboratoire de Biogenèse Membranaire, UMR5200, Université de Bordeaux, CNRS, F-33000 Bordeaux, France. Rothamsted Research, Harpenden, Herts AL5 2JQ, United Kingdom.

S5 P8 Arabidopsis 3-keto acyl-CoA synthase 9 is involved in the synthesis of tetracosanoic acids, which are essential precursors for the biosynthesis of cuticular waxes and suberin polyesters.
Juyoung Kim[1], Jin Hee Jung[1], Young Sam Go[2], Seat Byul Lee[1] and Mi Chung Suh[1].[1] Department of Bioenergy Science and Technology, Chonnam National University, Gwangju500-757, Republic of Korea.[2] Department of Plant Biotechnology, Chonnam National University, Gwangju 500-757, Republic of Korea.

S5 P9 Characterization of cutin mutants of Arabidopsis by Fourier Transform Infrared-Microspectroscopy.
Sylwester Mazurek and Christiane Nawrath. Department of Plant Molecular Biology, University of Lausanne, CH-1015 Lausanne, Switzerland.

S5 P10 Characterization of Bayberry surface lipid production provides evidence for a new pathway to produce triacylglycerol in plants.
Simpson, J. and Ohlrogge, J. Department of Plant Biology, Michigan State University, East Lansing, Michigan, USA.

S5 P11 Identification and characterization of a cytochrome P450 involved in the synthesis of cutin hydroxyacids in *Arabidopsis thaliana*.
Verdier G, Sauveplane V, Li-Beisson Y, Pinot F and Beisson F. CEA/CNRS/Aix-Marseille Université, Cadarache, FranceCNRS/Université de Strasbourg, Strasbourg, France.

S6 P1 Structure and biological functions of dihydroxylated metabolites synthesized from alpha-linolenate by soybean lipoxygenase.
Liu M.[1], Vericel E.[1], Chen P.[2], Lelli M. L.[3], Beguin L.[3], Lagarde M.[1] and Guichardant M.[1].[1] Université de Lyon, UMR 1060 INSERM (CarMeN), IMBL/INSA-Lyon, F69621, Villeurbanne, France.[2] Tea Science Department, College of Agriculture and Biotechnology, Zhejiang University, Hangzhou, 10029, P. R. China.[3] Centre de RMN, Institut de Sciences Analytiques, Université de Lyon / UCB Lyon 1 F69621 Villeurbanne, France.

S6 P2 Spectral shift and partitioning of activities between allene oxide synthase and hydroperoxide lyase by binding of type II ligands and point mutations at F92 and P430 in rice allene oxide synthase-1 .
Yoeun, S., Kim, J. and Han, O. Department of Molecular Biotechnology, College of Agricultural Life Sciences, Chonnam National University, 500-757, Republic of Korea.

S6 P3 Dependence of oligomeric state of dual positional substrate specific rice allene oxide synthase-1 on detergent micelle.
Yoeun, S., Kim, J. and Han, O. Department of Molecular Biotechnology, College of Agricultural Life Sciences, Chonnam National University, 500-757, Republic of Korea.

S6 P4 Membrane Binding and Activation of 11R-Lipoxygenase – The activating capability of Ca^{2+} is strongly influenced by the nature of membrane.
Reet Järving[1], Aivar Lõokene[1], Reet Kurg[2], Ivar Järving[1] and Nigulas Samel[1].[1] Dept. of Chemistry of Chemistry, Tallinn University of Technology, Tallinn, Estonia.[2] Institute of Technology, University of Tartu, Tartu, Estonia.

S6 P5 Functional analysis of a JA responsive gene *CHJ*.
Hikaru Saito[1], Tomoya Utsumi[1], Shinji Masuda[2], Hiroyuki Ohta[2].[1]Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama, Japan.[2] Center for Biological Resources and Informatics, Tokyo Institute of Technology, Yokohama, Japan.

S7 P1 *Argania spinosa* a source of triterpene bioactive compounds.
Rada M.[1], Ourrach I.[2], Castellano J.M.[1], Benaissa M.[2], Pérez-Camino M.C.[1], Cayuela J.A.[1], Delgado T.[1] and Guinda Á.[1].[1] Department of Food Quality and Characterization. lnstituto de la Grasa (CSIC).Avda. Padre García Tejero, 4 41012 Seville, Spain.[2] Faculty of Sciences Université Hassan II, Aîn Chock- Casablanca- Morocco.

S8 P1 Regulation of oxidative stress-induced cell death via sphingolipid metabolism and remodeling of plasma membrane microdomain.
Ishikawa, T., Uchimiya, H. and Kawai-Yamada, M. Graduate School of Science and Engineering, Saitama University, Shimo-Okubo 255, Sakura-ku, Saitama, Japan.

S8 P2 56-Amino acid small subunits of serine palmitoyltransferase stimulate sphingolipid synthesis, impact mycotoxin sensitivity and are essential for pollen viability in Arabidopsis.
Athen N. Kimberlin[1], Saurav Majumder[2], Ming Chen[1], Gongshe Han[2], Julie M. Stone[1], Teresa M. Dunn[2] and Edgar B. Cahoon[1].[1] Center for Plant Science Innovation and Department of Biochemistry, University of Nebraska-Lincoln, Beadle Center, 1901 Vine Street, Lincoln, Nebraska 68588 USA.[2] Department of Biochemistry and Molecular Biology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Maryland 20814 USA.

S8 P3 Unraveling the metabolic and biological importance of sphingolipid long-chain base Δ4 unsaturation in plants.
Amit Mehra, Akane Kamakagi, Jonathan E. Markham, Rebecca E. Cahoon and Edgar B. Cahoon. Center for Plant Science Innovation and Department of Biochemistry, University of Nebraska-Lincoln, Lincoln, Nebraska 68588 USA.

S8 P4 Analysis of glucosylceramides and steryl glucosides in plant samples by LC–MS/MS.
Nishimoto, A., Watanabe, M. and Imai, H. Department of Biology, Konan University, 8-9-1 Okamoto, Higashinada-ku, Kobe 658-8501, Japan.

S8 P5 Functional analysis of a gene for long-chain base kinase in Arabidopsis.
Yanagawa D., Shimada N. and Imai H. Department of Biology, Konan University, 8-9-1 Okamoto, Higashinada-ku, Kobe 658-8501, Japan.

S8 P6 Preliminary characterization studies on Sacha Inchi (*Plukenetia volubilis* L.) seeds and oils grown in San Martín, Peru.
Chasquibol, N.[1], Moreda, W.[2], Yácono, J.C.[1] and Pérez-Camino, M.C.[2].[1] Facultad de Ingeniería Industrial, Instituto de Investigación Científica, Universidad de Lima, Perú.[2] Instituto de la Grasa (CSIC), Avda. Padre García Tejero 4, 41012-Sevilla, Spain.

S8 P7 Chemical characterization of a novel vegetable resource of phytosterols: Oil Sacha inchi (*Plukenetia volubilis* L.).
Fernando Ramos-Escudero, María Teresa Morales and Agustín G. Asuero. Department of Analytical Chemistry, University of Seville, c/Profesor García González 2, 41012-Seville, Spain.

S9 P1 Is there protein-assisted long-distance phosphatidic acid signaling in plants?.
Benning, U.F., Tamot, B. and Hoffmann-Benning, S. Michigan State University, Department of Biochemistry and Molecular Biology, East Lansing, MI 48824, USA.

S9 P2 A role of phosphatidylinositol 3,5-bisphosphate in vacuolar structure change in guard cells of closing stomata.
Gwangbae Bak[1], Eun-Jung Lee[2], Yuree Lee[1], Jae-Ung Hwang[1], Kato Mariko[3], Shoji Segami[3], Masayoshi Maeshima[1] and Youngsook Lee[2].[1] POSTECH-UZH Cooperative Laboratory, Department of Molecular Life Science, Pohang University of Science and Technology (POSTECH), Pohang, 790-784, Korea.[2] Department of Integrative Bioscience and Biotechnology, World Class University Program, POSTECH, Pohang, 790-784, Korea.[3] Laboratory of Cell Dynamics, Graduate School of Bioagricultural Sciences, Nagoya University, Nagoya, Japan.

S9 P3 ROF1 and ROF2 affect plant germination under osmotic and salinity stress through a phosphatidylinositol-phosphate related pathway.
Debora Karali[1], David Oxley[2], Grigoris Amoutzias3, John Runions4, Nicholas Ktistakis5 and Theodora Farmaki1.[1] Institute of Agrobiotechnology Center for Research and Technology - Hellas 6th km Charilaou - Thermi rd. 570 01 Thermi Thessaloniki Greece.[2] The Mass Spectrometry Group, Babraham Institute, Cambridge, CB2 4AT, UK.[3] Department of Biochemistry & Biotechnology, University of Thessaly, Larisa, 41221, Greece.[4] School of Life Sciences, Oxford Brookes University, Oxford OX3 0BP, UK.[5] Signalling Programme, Babraham Institute, Cambridge, CB2 4AT, UK.

S9 P4 Role of phosphatidylglycerol in cell division.
Tímea Ottilia Kóbori*[1], Tatsuya Uzumaki[2], Mihály Kis[1], Anna Sallai[1], Balázs Bogos[1], Ildikó Domonkos[1], Hajnalka Laczkó-Dobos[1], Shigeru Itoh[2], Zoltán Gombos[1] and Bettina Ughy[1].[1] Biological Research Centre, Hungarian Academy of Science, H-6726 Szeged Temesvári krt. 62, Hungary.[2] Nagoya University, Physics Department, Japan.

S9 P5 Phosphatidylserine is important for vesicle transport during root development in *Arabidopsis thaliana*.
Yasuyo Yamaoka (1,2), Yuki Fujiki[1], Youngsook Lee[2] and Ikuo Nishida[1].[1] Laboratory of Plant Molecular Physiology, Graduate School of Science and Engineering, Saitama University, Shimo-Okubo 255, Sakura-Ku, Saitama 338-8570, Japan.[2] Global Research Lab, Division of Molecular Life Sciences, POSTECH, Pohang 790-784 Korea.

S9 P6 Subcellular mechanism of plant phospholipase A genes and their functional characteristics in plant growth and development.
Kim YJ and Lee OR. Department of Oriental Medicinal Materials and Processing, College of Life Science, Kyung Hee University, Suwon 449-701, Korea.

S9 P7 A novel membrane protein in the chloroplast inner envelope involved in fatty acid export.
Nannan Li, Irene Gügel, Jürgen Soll and Katrin Philippar. Plant Biochemistry and Physiology, Department Biology I, Ludwig-Maximilians-University Munich, Großhadernerstr. 2-4, D-82152 Planegg-Martinsried, Germany.

S9 P8 The role of non-specific phospholipase C in plant response to pathogen attack.
Martinec, J.[1], Krckova Z.[2], Pejchar P.[1], Brouzdova J.[1] and Kocourkova D.[1].[1] Institute of Experimental Botany, Academy of Sciences of the Czech Republic, Rozvojova 263, 165 00 Prague 6, Czech Republic.[2] Department of Biochemistry and Microbiology, Institute of Chemical Technology, Prague, Technicka 3, 166 28 Prague 6, Czech Republic.

S9 P9 Cardiolipin plays crucial roles in plant mitochondria and development.
Kenta Katayama (1,2,3,4), S. Tanabashi[5], N. Nagata[5], H. Akbari[6], M. Frentzen[6], S. Arimura[2], N. Tsutsumi[2] and H. Wada (3,4).[1] The Japan Society for the Promotion of Science, Japan.[2] Department of Agricultural and Environmental Biology, Graduate School of Agricultural and Life Sciences,[3] Department of Biological Sciences, Graduate School of Science, [4] Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan.[5] Faculty of Science, Japan Women's University, Tokyo, Japan.[6] Institute for Biology I, RWTH Aachen University, Aachen, Germany.

S9 P10 Carnitine - a fatty acid carrier in plant Implication of carnitine during normal and affected development, in connection with the lipid metabolism.
Nguyen P. J., Rippa S. and Perrin Y. UMR CNRS 6022, Université de Technologie de Compiègne, Compiègne, France.

S9 P11 Carnitine - a fatty acid carrier in plant Study of the carnitine biosynthesis pathway in *Arabidopis thaliana*.
Rippa S., Yingjuan Z. and Perrin Y. UMR CNRS 6022, Université de Technologie de Compiègne, Compiègne, France.

S10 P1 Genetic engineering of *Scenedesmus almeriensis* for biofuel production.
Datour, Y., Chileh, T., Mañas-Fernández, A., García-Maroto, F. and López Alonso, D. Biotechnology of Natural Products Group, University of Almería, 04120-Almería, Spain.

S10 P2 Effects of inoculum size, light intensity and nitrogen availability on growth and LC-PUFA production by the green microalga *Parietochloris incise*.
Dipasmita Pal, Inna Khozin Goldberg, Zvi Cohen and Sammy Boussiba. The Microalgal Biotechnology Laboratory, The Jacob Blaustein Institutes for Desert Research, Ben Gurion University of the Negev, 84990, Sde Boqer, Israel.

S10 P3 The role of the plastid enzymes of central carbon metabolism in de novo fatty acid and TAG biosynthesis in the green microalga *Parietochloris incisa* under nitrogen starvation.
Nastassia Shtaida, Inna Khozin-Goldberg, Zvi Cohen and Sammy Boussiba. Microalgal Biotechnology Laboratory, French Associates Institute for Agriculture and Biotechnology of Drylands, Ben-Gurion University of the Negev, Sede Boqer Campus, Israel.

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Ando, A., Okuda, T., Kikukawa, H., Sakuradani, E., Shima, J., Ogawa, J. and Shimizu, S. Kyoto University, Kyoto 606-8502, Japan.

S10 P6 Characterization of a new oleaginous microalgal strain isolated from the marshlands of the Odiel river in the southwest of Spain and optimization of its genetic manipulation.
Díaz E, De la Vega M, Vila M and León R. Biochemistry Lab., Experimental Sciences Faculty, Huelva University, Avd. Fuerzas Armadas s/n, 21071-Huelva, Spain.

S11 P1 Altering fatty acid composition in *Crambe abyssinica* by multiple-gene RNAi.
R. Guan, X.Y. Li, P. Hofvander, D.N. Wang, I. Lager, S. Stymne and L.H. Zhu. Department of Plant Breeding and Biotechnology, Swedish University of Agricultural Sciences, SE230 53-Alnarp, Sweden.

S11 P2 Tapping the potential of Camelina as a platform for metabolic engineering of novel fatty acid and oil compositions.
Tara J. Nazarenus[1], Tam H. Nguyen[1], Jillian E. Silva[1], Anji Reddy Konda[1], Dongxin Huai (1,2), Manuel F. Rodriguez-Rodriguez (1,3), Anna Snapp[4], Chaofu Lu[4], Edgar B. Cahoon[1].[1] Center for Plant Science Innovation and Department of Biochemistry, University of Nebraska-Lincoln, Lincoln, Nebraska 68588 USA.[2] National Key Laboratory of Crop Genetic Improvement, Huazhong Agricultural University, Wuhan, Hubei 430070 China.[3] Instituto de la Grasa (CSIC), Av. Padre García Tejero 4, 41012-Sevilla, Spain.[4] Department of Plant Sciences and Plant Pathology, Montana State University, Bozeman, Montana 59717-3150 USA.

S11 P3 Development of regeneration and transformation protocol for *Lepidium campestre*.
Emelie Ivarson, Annelie Ahlman, Mirela Beganovic, Pia Ohlsson, Helén Lindgren and Li-Hua Zhu. Department of Plant Breeding and Biotechnology, Swedish University of Agricultural Sciences. SE230 53-Alnarp, Sweden.

S11 P4 Novel acyltransferases from long chain PUFA producing organisms.
Ida Lager[1], Laurent Marty[2], Toralf Senger[2], Joerg Bauer[2], Ernst Heinz[3], Sten Stymne[1] and Jenny Lindberg Yilmaz[1].[1] Scandinavian Biotechnology Research (ScanBiRes) AB, Alnarp, Sweden.[2] BASF Plant Science, Limburgerhof, Germany3Biozentrum Klein Flottbek, University of Hamburg, Germany.

S11 P5 Phenotypic changes in *A. thaliana* insertion mutated in genes encoding lysophosphatidylethanolamine: acyl-CoA acyltransferases (LPEATs) and some biochemical properties of the enzymes.
K. Jasieniecka[1], I. Lager[2], A. Banas[1], A.S. Carlsson[2] and S. Stymne[2].[1] Intercollegiate Faculty of Biotechnology of University of Gdansk and Medical University of Gdansk, Kladki 24, 80-822 Gdansk, Poland.[2] Department of Plant Breeding and Biotechnology, SLU, PO Box 44101, S-230 53 Alnarp, Sweden.

S11 P6 Characterisation of the *FAD2* gene family from *Hiptage benghalensis*, a ricinoleic acid accumulating plant.
Xue-Rong Zhou, Surinder P Singh, Bei Dong, Cheryl Blundell and Allan G Green. CSIRO Plant Industry, PO Box 1600, Canberra, ACT 2601, Australia.

S11 P7 Engineering ricinoleic acid in low-linolenic linseed.
Xue-Rong Zhou[1], Yurong Chen (2,3), Surinder P Singh[1], Cheryl Blundell[1], Bei Dong[1], Paul Dribnenki[2] and Allan G Green[1].[1] CSIRO Plant Industry, PO Box 1600, Canberra, ACT 2601, Australia.[2] Agricore United, PO Bag 4000, Vegreville, Alberta, Canada.[3] Current address, Monsanto Company, Agracetus Campus, 8520 University Green, P O Box 620999, Middleton, WI 53562, USA.

S11 P8 Wax ester production in Camelina seeds.
Mañas-Fernández, A.[1], Liang, W.-W.[2], Cahoon, E.[3], Kunst, L.[2]. [1] Department of Biology, University of Almeria, 04120-Almeria, Spain.[2] Department of Botany, University of British Columbia, V6T 1Z4-Vancouver, Canada.[3] Center for Plant Science Innovation & Department of Biochemistry, University of Nebraska-Lincoln, 68588-Lincoln, NE, USA.

S11 P9 In vitro substrate specificity of wax synthase from *Marinobacter hydrocarbonoclasticus*.
Miklaszewska M., Kawinski A. and Banas A. Intercollegiate Faculty of Biotechnology of University of Gdansk and Medical University of Gdansk, Kladki 24, 80-822 Gdansk, Poland.

S11 P10 *Vernicia montana*: from high value seed oils to biofuels?.
Thomas Roscoe[1], Saranya Srisuwan[2], Pranee Inprakhon[3] and Claudine Campa[4]. [1,4]CNRS ERL5300 Epigenetic Regulation and Seed Development Group1, UMR232 Plant Diversity, Adaptation and Development Laboratory, Institut de Recherche pour le Developpement, 911 Avenue Agropolis, 34394 Montpellier, France. [2]School of Science, Mae Fah Luang University, Chiang Rai, Thailand. [3]Department of Biotechnology, Faculty of Science, Mahidol University, Thailand.