

Programme ISPL 2026, Málaga

Sunday 5 July 2026

15:00-19:00

Registration and poster hang-up

16:00-19:00

Welcome reception

Monday 6 July

8:00-8:30

Registration and poster hang-up

8:30-8:45

Conference welcome - John B. Ohlrogge Memorial Lecture

Joaquín J. Salas and Noemí Ruiz López

8:45-12:00

Session 1 - Fatty Acid and Glycerolipid Synthesis

Moderators: Chaofu Lu and Jay Shockey

Keynote lecture

8:45-9:15

Expanding diversity of triacylglycerol assembly pathways and their control to produce designer plant oils

Phil Bates - Washington State University, US

9:15-9:30

Metabolism comes full circle: fatty acid breakdown and recycling

Doug Allen - Donald Danforth Plant Science Center, US

9:30-9:45

An expanded role for BADC function in pennycress

Timothy Patrick Durrett - Kansas State University, US

9:45-10:00

*β -ketoacyl-ACP reductase promotes plant growth and seed oil accumulation in *Brassica napus**

Yueyun Hong - Huazhong Agricultural University, CN

10:00-10:15

*2-Cys peroxiredoxins influence phosphatidylglycerol unsaturation levels in *Arabidopsis* leaves*

María Luisa Hernández - Institute of Plant Biochemistry and Photosynthesis, ES

10:15-10:45

Coffee break

- 10:45-11:00 *Towards the rational engineering of Physaria*
Ana Paula Alonso - University of North Texas, US
- 11:00-11:15 *DGAT enantiomer specificity and its role in TAG synthesis*
Ida Lager- Swedish University of Agricultural Sciences, SE
- 11:15-11:30 *Free fatty acid esterifying enzymes - Potential new players of cell membrane remodeling*
Antoni Banas-University of Gdansk, PL
- 11:30-11:45 *Systems biology of Camelina seeds to enhance next-generation sustainable aviation fuels*
Maneesh Lingwan- Donald Danforth Plant Science Center, US
- 11:45-12:00 *PHR1-Like 7 and phosphatidic acid oppositely regulate TAG degradation and seed oil accumulation in Arabidopsis*
Shan Tang- Yazhouwan National Laboratory, CN

12:00-13:30

Lunch

13:30-15:00 **Session 2 - Extraplasmidial Membrane Lipids: Sphingolipids and Sterols**
Moderators: Fred Domergue and Wei Ma

Keynote lecture

- 13:30-14:00 **Sphingolipid biosynthesis across land plants**
Ivo Feussner - Georg-August University of Göttingen, DE
- 14:00-14:15 *Glycosylceramide assembly and function in a model Bryophyte*
Tegan M. Haslam - Georg-August University of Göttingen, DE
- 14:15-14:30 *Plant sphingolipid homeostasis affects microbial pathogen performance in Arabidopsis thaliana*
Brian Vue - University of Bordeaux, FR
- 14:30-14:45 *Distinct functions of cycloartenol-derived sterols in plants*
Hubert Schaller - Institut de Biologie Moléculaire des Plantes du CNRS, FR
- 14:45-15:00 *Disrupting glycosylated sterols alter plasma membrane organization and cell-to-cell communication*
Ángel Chavez - Universität Hohenheim, DE

15:00-15:30

Coffee break

15:30-17:30

Session 3 - Plastidial and Algal Lipids

Moderators: Miguel Alfonso and Fred Beisson

15:30-16:00

Keynote lecture

MGDG synthases unleashed: from chloroplast heritage to novel functions across eukaryotic evolution

Eric Marechal - LPCV CNRS-CEA-INRAE-UGA, FR

16:00-16:15

*Establishment of an improved activation-tagging system in *Nannochloropsis oceanica* enables isolation of high-oil-accumulating mutants*

Mie Shimojima - Institute of Science Tokyo, JP

16:15-16:30

Essential roles of plastoglobule fibrillin proteins in chloroplast development and lipid homeostasis

Yu-Ri Choi - Sejong University, KR

16:30-16:45

Molecular insights and biotechnological applications of lipid turnover in cyanobacteria

Haruhiko Jimbo - Graduate School of Science and Engineering, JP

16:45-17:00

*A new genome-scale metabolic model of oleaginous microalgae with refined lipid metabolism clarifies *Microchloropsis gaditana* mutant phenotypes*

Juliette Jouhet - Laboratoire de Physiologie Cellulaire et Végétale, FR

17:00-17:15

*Identification of a putative chloroplastic lipase impacting specific fatty acids in *Chlamydomonas reinhardtii**

Mattia Cirimele - CEA-Cadarache-BIAM, FR

17:15-17:30

*Lipid remodeling for low-temperature adaptation in a novel psychrophilic marine microalga *Chlamydomonas* Sp. LWD1*

Fantao Kong - Dalian University of Technology, CN

17:30-19:00

Poster Session

Tuesday 7 July

9:00-10:15

Session 4 - Lipid Trafficking and Membrane Contact Sites

Moderators: Rosa Laura López and Till Ischebeck

9:00-9:30

Keynote lecture

A new interface between the ER and chloroplasts

Federica Brandizzi - Michigan State University, US

9:30-9:45

Role of PI4P phosphoinositide in the establishment and dynamics of endoplasmic reticulum-plasma membrane contact sites in plants

Vedrana Markovic- University of Lyon, ENS de Lyon, CNRS and INRAE, FR

9:45-10:00

SYT6 Bridges the ER-vesicle interface to regulate VAMP721-dependent trafficking and auxin transport In Arabidopsis thaliana

Miriam Moya Barrientos - The Institute for Mediterranean and Subtropical Horticulture, ES

10:00-10:15

Characterization of the protein S-Acyltransferase (PAT) gene family in Lilium longiflorum and its regulatory role in pollen tube growth

Andrea Román-Mateo- Estación Experimental del Zaidín (CSIC), ES

10:15-10:45

Coffee break

10:45-12:15

Session 5 - Emerging Methods and Lipidomics

Moderators: Ana P. Alonso and Joliette Jouhet

10:45-11:15

Keynote lecture

Prediction of key genes and their functions in seed-related traits in rapeseed through multi-omics analysis integrating ai and machine learning

Liang Guo- Yazhouwan National Laboratory. CN

11:15-11:30

Molecular dynamic simulation of plant plasma membrane lipids: asymmetry, cross bilayer coupling, lipid diffusion, nanodomain formation

Sebastien L Mongrand- LBM- CNRS/University of Bordeaux, FR

11:30-11:45

Maize KCS isozyme diversity confers combinatorial control of VLCFA chain-length determination in engineered yeast

Rajib Saha- University of Nebraska-Lincoln, US

11:45-12:00 *Meeting the analytical challenges of fatty-acid engineering: comprehensive methods for glycerolipids identification and quantitation in omega-3 enhanced oilseeds*
Daria Makeeva- Rothamsted Research, UK

12:00-12:15 *Towards comprehensive lipid quantification in plants: an update on the community ring trial*
Katharina Gutbrod- University of Bonn, DE

12:15-12:30 *B5 omicsverse: a multiomics data discovery and learning platform for bigger better brassicaceae biofuel and bioproducts (B5)*
Trupti Joshi- Marshall University, US

12:30-14:00

Lunch

14:00-15:30 Session 6 - Surface Lipids

Moderators: Isabel Molina and Mie Shimojima

14:00-14:30 Keynote lecture

Temporal regulation of cuticle biosynthesis: diurnal wax and nocturnal cutin
Mi Chun Suh - Sogang University, KR

14:30-14:45 *New insights into suberin formation*
Frédéric Domergue - University of Bordeaux, FR

14:45-15:00 *MsDEWAX2-driven expression of ZxABCG11 from a xerophyte enables drought resistance without reproductive penalty in alfalfa*
Suo Min Wang - Lanzhou University, CN

15:00-15:15 *Comparative isomer profiling of wax secondary alcohols across diverse plant lineages: divergent versus convergent biosynthesis*
Reinhard Jetter - University of British Columbia, CA

15:15-15:30 *Proteomic mapping of the stress responsive myb41 regulatory network in Arabidopsis*
Kassandra Fugard-Carleton University, CA

15:30-16:00

Coffee break

16:00-17:45

Session 7 - Lipid Signaling

Moderators: Tegan Haslam and Yuki Nakamura

Keynote lecture

16:00-16:30

Acute remodeling of phosphoinositide lipids downstream of receptor kinase signaling

Yvon Jaillais-RDP lab - ENS de Lyon – CNRS, FR

16:30-16:45

The Arabidopsis Flippase ALA2 is required for proper stomatal development and immune responses

Rosa Laura Lopez Marques - University of Copenhagen, DK

16:45-17:00

Proximity labelling-based approach for discovery of new lipid-protein interaction in planta

Lise C. Noack - University of Copenhagen, DK

17:00-17:15

Reciprocal regulation between the circadian clock and phospholipase d-driven phosphatidic acid production in plant responses to temperature change

Johnny Johns-Donald Danforth Plant Science Center, US

17:15-17:30

How membrane organisation helps to determine specificity of ROP6 nanodomain signalling in the plasma membrane

Patricia Scholz - Laboratoire Reproduction et Développement des Plantes, ENS de Lyon, CNRS, INRAE, FR

17:30-17:45

Lipopeptide sensing by membrane sphingolipids drives mechanosensitive plant immunity

Magali Deleu - Gembloux Agro-Bio Tech- University of Liège – BE

17.45-19:00

Poster Session

Wednesday 8 July

9:00-9:30 Featured Talk

Fats on a mission: The anti-inflammatory power of pamitoleic acid

Jesús Balsinde - Universidad de Valladolid, ES

9:30-10:00 Paul K. Stumpf Award Ceremony and Lecture

The mechanism of dynamin-related protein 1A in facilitating the biogenesis of lipid droplets in plant cells

Cai Yingqi - Washington State University, US

10:00-10:30

Coffee break

10:30-11:20 Terry Galliard Medal Ceremony and Lecture

A lipid journey: from building plant polymers to algal oil metabolism

Yonghua Li-Beisson - CEA Cadarache, FR

11:20 Conference Photo and Excursions

Thursday 9 July

9:00-12:30 Session 8 - Triacylglycerol Metabolism and Lipid Droplets

Moderators: Ida Lager and Agnieszka Zienkiewicz

EMBO GLOBAL INVESTIGATOR LECTURE

9:00-9:20

The role of MYB-mediated condensates in fine-tuning Arabidopsis seed oil accumulation

Wei Ma - Nanyang Technological University, SG

9:20-9:35

Dissecting the pathway to high-oleic acid vegetable oils: which genes matter?

Jay Shockey- USDA-ARS, New Orleans, US

9:35-9.50

Functions of arabidopsis lysophosphatidic acid acyltransferases 1 and 2 across reproductive development and glycerolipid metabolism

Qiong Xiao- RIKEN Center for Sustainable Resource Science, JP

9:50-10:05

Gene editing and lipidomic studies support a key role of DGAT1 For TAG biosynthesis and erucic acid incorporation during maturation in the pennycress seed

Miguel Alfonso-EEAD-CSIC, Zaragoza, ES

10:05-10:20 *A pull-and-protect strategy enhances triacylglycerol accumulation in Chlamydomonas reinhardtii*
Magdalena Miklaszewska- Center for Biotechnology (CeBiTec), DE

10:20-10:35 *ERF55 controls fatty acid and TAG biosynthesis during seed development*
Hyun Uk Kim- Sejong University, KR

10.35-11:00

Coffe break

11:00-11:15 *Lipid droplets as key hubs for specialized metabolism in plants*
Till Ischebeck - University of Münster, DE

11:15-11:30 *Remobilization of plant lipid droplets following abiotic stress*
Alexis Corbic - Université de Bordeaux, FR

11:30-11:45 *Proteome of roots reveals two new lipid droplet associated proteins: bifunctional wax ester synthase/diacylglycerol acyltransferases 4 and 6.*
Ana Carolina Vilchez - University of Münster, DE

11:45-12:00 *Identification and characterization of a novel LD-associated lipase in the model microalga Chlamydomonas reinhardtii*
Carla Blot - CEA Cadarache, FR

12:00-12:15 *Turnip mosaic virus uses lipid droplets biogenesis machinery to facilitate its propagation in plants*
Léna Jambou - Université de Bordeaux, FR

12:15-12:30 *Uncovering lipid remodelling and seed oil accumulation trade-offs when producing novel fatty acids in genetically modified Camelina sativa lines*
Susana Silvestre - Rothamsted Research, UK

12:30-14:00

Lunch

14:00-17.30 **Session 9 - Plant Lipids and Stress Response**
Moderators: Haruiko Jimbo and Sebastien Mongrand

Keynote lecture

14:00-14:30 **Lipids responses in plant stress and development**
Peter Doermann – University of Bonn, DE

14:30-14:45 *Deciphering the evolutionary loss of betaine lipids during plant terrestrialization: a study by producing DGTS in Arabidopsis*
Yuki Nakamura - RIKEN Center for Sustainable Resource Science, JP

14:45-15:00 *Phosphoinositide-dependent plasma membrane targeting of plastid movement impaired*
Olga Sztatelman - Institute of Biochemistry and Biophysics Polish Academy of Sciences, PL

15:00-15:15 *Interacting effects of warming and declining oxygen on membrane lipids in freshwater phytoplankton*
Jacob Murphy - Cardiff University, UK

15:15-15:30 *Linolenic acid derived JA is involved in cold tolerant germination of Brassica napus*
Xiao-Li Tan - Jiangsu University, CN

15:30-16:00

Coffee break

16:00-16:30 **Keynote lecture**
Stress-induced lipid dynamics in photosynthetic aquatic organisms
Yasuyo Yamaoka - The Catholic University of Korea, KR

16:30-16:45 *How plants survive heavy-metal stress: lipid remodeling, gene networks, and translational opportunities*
Sanju Sanjaya - West Virginia State University, US

16:45-17:00 *Does Peroxisomal β -Oxidation-Mediated Lipid Droplet Degradation Promote Potyvirus Infection In Plants?*
Marguerite Batsale- INRAE-University of Bordeaux, FR

17:00-17:15 *Decreases in polyunsaturated fatty acid content improves heat stress tolerance during flowering and silicle development in pennycress (*Thlaspi arvense* L.)*
John Sedbrook - Illinois State University

17:15-19:00

Poster session

20:30

Gala dinner

Friday 10 July

9:00-12:30

Session 10 - Plant Lipid Biotechnology

Moderators: Doug K. Allen and Tim P. Durrett

9:00-9:30

Keynote lecture

Translating Research: From Lab-to-Field-to-Application.

Ed Cahoon - University of Nebraska-Lincoln, US

9:30-9:45

Overexpression of CsMYB1 increases seed size and alters carbon metabolism in Camelina sativa

Chaofu Lu - Montana State University, US

9:45-10:00

Beyond biological roles: plant lipids as building blocks for multifunctional polymer materials

Diego Rodríguez-Rodríguez - Instituto de Hortofruticultura Subtropical y Mediterránea La Mayora, ES

10:00-10:15

Exploiting glucose- and ammonium-containing media as a promising strategy to enhance triacylglycerol accumulation in Chlorella sorokiniana

Seungwoo Shin - The Catholic University of Korea, KR

10:15-10:45

Coffee break

10:45-11:00

Lipid derived bio-based composite films from tomato peels reinforced with cellulose nanocrystals

Francisco Javier Solano Moreno - Instituto de Hortofruticultura Subtropical y Mediterránea La Mayora, ES

11:00-11:15

Soybean FAD2/FATB editing enhances late maturation triacylglycerol accumulation via altered phosphatidic acid level and lipid turnover in high-oleic low-saturated seeds

Won Nyeong Kim - Sejong University, KR

11:15-11:30

A promoter structural variation unleashes erucic acid accumulation in Brassica napus

Yuanxue Liang - Jiangsu University, CN

11:30-11:45

Biochemical diversity of carotenoids and tocochromanols in Elaeis guineensis
Safoora Shirvani - Institute of Molecular Physiology and Biotechnology of Plants, DE

11:45-12:45

Closing Remarks and Presentation of Upcoming Meetings