

## 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*  
Dough 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

*$\beta$ -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  $\beta$ -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**