



**CBGP**  
CENTRO DE BIOTECNOLOGÍA  
Y GENÓMICA DE PLANTAS  
UPM-INIA/CSIC

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**CSIC**  
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

**INIA**  
Instituto Nacional de Investigación  
y Tecnología Agraria y Alimentaria



# PlantACT!

C o n f e r e n c e

**APRIL**  
**7<sup>th</sup>-9<sup>th</sup>**  
**2025**

E.T.S.I. Agronómica, Alimentaria  
y Biosistemas-UPM, Madrid (Spain)

# Program

[www.plantactconference2025.cbgrp.upm.es](http://www.plantactconference2025.cbgrp.upm.es)





# Monday, April 7<sup>th</sup>

**8:30-9:15**

REGISTRATION AT ETSIAAB-UPM

**9:15-9:50**

OFFICIAL OPENING PLANTACT! CONFERENCE 2025 BY AUTHORITIES

**CHAIR:**

**Pilar Cubas**, CNB-CSIC, Spain

**9:50-10:30**

**Fernando Maestre**

*King Abdullah University of Science and Technology, Saudi Arabia*

Using food systems to achieve global environmental goals

**10:30-11:10**

**Siobhan Brady**

*College of Biological Sciences, University of California - Davies, USA*

Root Cell Types and their Interaction with the Environment

**11:10-12:00**

COFFEE BREAK AND POSTERS SESSION (DOMO)

**CHAIR:**

**Krzysztof Wabnik**, CBGP (UPM-INIA/CSIC), Spain

**12:00-13:10**

INVITED TALKS

**Juan Carlos del Pozo**

*CBGP (UPM-INIA/CSIC), Spain*

Enhancing Plant Resilience to Heat Stress: Lessons Learned from Temperature Changes in the Root Ecosystem

**Ido Nir**

*Agriculture Research Organization - Volcani Institute, Israel*

Tomato stomatal development: Diverse mechanisms of adaptive flexibility revealed by multi-species analysis

**José M Jiménez-Gómez**

*CBGP (UPM-INIA/CSIC), Spain*

Parallel Evolution of Salinity Tolerance in *Arabidopsis thaliana* Accessions from Cape Verde Islands

**Pablo Pérez-García**

*CBGP (UPM-INIA/CSIC), Spain*

Optogenetic Synthetic Circuits for Targeted Reprogramming of Pluripotent Cells in Plants

**Pilar Prieto**

*Institute for Sustainable Agriculture-CSIC, Spain*

Molecular and cytogenetic approaches to unzip chromosome interactions during meiosis for wheat breeding

**Eilon Shani**

*Tel Aviv University, Israel*

Breaking Redundancy: A Multi-Target CRISPR Approach to Uncover Hidden Plant Stress Response Mechanisms

**13:10-14:40**

LUNCH AND POSTERS SESSION (DOMO)

**CHAIR:**

**Isabel Allona**, CBGP (UPM-INIA/CSIC), Spain

**14:40-15:20**

**Paloma Ruiz Benito**

*Universidad de Alcalá de Henares, Spain*

Unraveling evidence of climate change impacts in Mediterranean forest dynamics: challenges and Opportunities

**15:20-16:00**

**Gloria Coruzzi**

*Center for Genomics and Systems Biology, New York University, USA*

A systems approach to enhancing NUE/WUE, sustainable traits in the balance

**CHAIR:**

**José M. Pardo**, Instituto de Bioquímica Vegetal y Fotosíntesis, CSIC, Spain

**16:00-16:30**

INVITED TALKS

**Pedro Crevillen**

*CBGP (UPM-INIA/CSIC), Spain*

Histone demethylases regulate flowering time in response to ambient temperature

**Mariano Perales**

*CBGP (UPM-INIA/CSIC), Spain*

Environmental control of growth in trees

**Daniel Conde**

*CBGP (UPM-INIA/CSIC), Spain*

Single-nucleus transcriptomics revealed auxin-mediated mechanisms of wood plasticity to enhance severe drought tolerance in poplar

**16:30-17:10**

COFFEE BREAK AND POSTERS SESSION (DOMO)

**CHAIR:**

**José M. Pardo**, Instituto de Bioquímica Vegetal y Fotosíntesis, CSIC, Spain

**17:10-17:30**

INVITED FLASH TALKS

**Daniela Gómez-Soto**

*CBGP (UPM-INIA/CSIC), Spain*

Insights into the regulation of endodormancy transcriptome: *Populus TEMPRANILLO-like 1* and *2* act as dormancy regulators

**Benjamin Menn**

Heinrich Heine University Düsseldorf, Germany

**Deciphering Mixed-Linkage Glucan (MLG) biosynthesis and the perception of MLG-derived oligosaccharides by the plant immune system to develop sustainable crop protection solutions**

**Pablo Rodríguez**

CBGP (UPM-INIA/CSIC), Spain

**Dissection and modeling of the photoperiodic growth-promoting pathway in populus**

**Fabio Pasin**

Instituto de Biología Molecular y Celular de Plantas (IBMCP, CSIC-UPV), Spain

**Engineering good viruses for crop trait reprogramming**

**17:30-19:00****WORKSHOP SCIENCE COMMUNICATION FOR PLANT SCIENTISTS****Isabel Mendoza**

The Global Plant Council / ScienceFlows Research Group, University of Valencia, Spain

**Tuesday, April 8<sup>th</sup>****CHAIR:**

**Antonio Molina**, CBGP (UPM-INIA/CSIC), Spain

**9:00-9:40****Gabriele Berg**

Institute of Environmental Biotechnology, Graz University of Technology, Austria

**The plant microbiome matters**

**9:40-10:20****Maria José Sanz**

Basque Centre for Climate Change, Spain

**Climate change and food systems**

**CHAIR:**

**Andreas Weber**, Heinrich Heine University Düsseldorf, Germany

**10:20-10:50****INVITED FLASH TALKS****Silvia Manrique**

Instituto de Biología Molecular y Celular de Plantas (IBMCP, CSIC-UPV), Spain

**Unraveling the molecular crosstalk between reproduction and stress in eggplant, a model for andromonoecious Solanaceae**

**Meriem Aitoguina**

CBGP (UPM-INIA/CSIC), Spain

**Identification of novel cell wall-derived DAMPs triggering immune responses in Arabidopsis thaliana**

**Ana Cecilia Aliaga Fandino**

CBGP (UPM-INIA/CSIC), Spain

**Pathogen induced abscisic acid-dependent cascade suppresses root vascular formation**

**Varsa Shukla**

Institute for Plant Sciences, University of Cologne, Germany

**Adaptive potential of sulfate content in Arabidopsis thaliana**

**Arturo Redondo López**

CBGP (UPM-INIA/CSIC), Spain

**Comparative transcriptomics reveals novel molecular mechanisms for metal tolerance in Poplar for phytoremediation applications**

**Ratchaprapa Ruengsang**

King Mongkut's University of Technology Thonburi, Thailand

**Approaching Complex Carbon Conversion in Cassava Root Metabolism Using Transcriptome-Integrated Metabolic Modeling**

**10:50-11:40****COFFEE BREAK AND POSTERS SESSION (DOMO)****CHAIR:**

**Andreas Weber**, Heinrich Heine University Düsseldorf, Germany

**11:40-12:20****Fernando Valladares**

Museo Nacional de Ciencias Naturales - CSIC, Spain

**Forests as carbon sinks: current situation and the role of biodiversity**

**12:20-13:40****ROUND TABLE:**

**Water and climate challenges for food production and ecosystems sustainability**

**MODERATOR: Dario Pescador**, QUO Journal**Participants:**

**María José Sanz**, Basque Centre for Climate Change

**Irene Blanco**, CEIGRAM, Universidad Politécnica de Madrid

**Heribert Hirt**, King Abdullah University of Science and Technology, Saudi Arabia

**Daniel Conde**, Centro de Biotecnología y Genómica de Plantas UPM – INIA/CSIC

**13:40-15:00****LUNCH AND POSTERS SESSION (DOMO)****CHAIR:**

**Cornelia Rumpel**, iEES Paris, CNRS, France

**15:00-15:40****Ron Mittler**

College of Agriculture, Food and Natural Resources, University of Missouri, USA

**The impact of stress combination on crop yield in a changing climate**





**CHAIR:**

**Cornelia Rumpel**, *iEES Paris, CNRS, France*

**15:40-16:20**

**INVITED TALKS**

**Anca Lucau-Danila**

*University of Lille, France*

**Deciphering Chicory's Microbiome and its Environmental Interactions**

**Iván Jáuregui**

*Public University of Navarre (UPNA), Spain*

**Unraveling the genetic basis of wheat root exudates' capacity to inhibit nitrifying bacteria growth—a promising trait for sustainable wheat cultivation**

**Alicia Pou Mir**

*Instituto de Ciencias de la Vid y del Vino (Gobierno de La Rioja, CSIC, Universidad de La Rioja), Spain*

**Exploring Intra-varietal Diversity as a Strategy for Adapting to Climate Change**

**Lucia Jorda**

*CBGP (UPM-INIA/CSIC), Spain*

**Plant Leucine Rich Repeat-Malectin Receptor Kinases: novel players in plant immunity and disease resistance triggered by cell wall-derived glycans**

**16:20-17:00**

**COFFEE BREAK AND POSTERS SESSION (DOMO)**

**17:00-18:45**

**ROUND TABLE:**

**Challenges of future generations: training and innovation**

**MODERATOR:** **Elena Caro Bernat**, *CBGP (UPM-INIA/CSIC)*

**Participants:**

**Jose Luis Molina**, *Hispattec*

**Jose Nolasco**, *Rovens Next*

**Emilio Rodríguez-Cerezo**, *JRC-EU Sevilla*

**Claudia Artola Jurado**, *ETSIAAB, Universidad Politécnica de Madrid*

**18:45-19:30**

**PLANTACT BUSINESS MEETING (DOMO)**

**CHAIRS:**

**Heribert Hirt, Andreas Weber and Antonio Molina**



**Wednesday, April 9<sup>th</sup>**

**CHAIR:**

**Manuel Piñeiro**, *CBGP (UPM-INIA/CSIC), Spain*

**9:00-9:40**

**Jaume Flexas**

*Instituto de Investigaciones Agroambientales y de Economía del Agua, Universitat de les Illes Balears, Spain*

**Why should ecophysiology focus on plants from extreme environments?: from 'sherplants' to 'shercrops'**

**9:40-10:20**

**Caroline Delker**

*Crop Physiology, Martin Luther University Halle - Wittenberg, Germany*

**Modulators of plant thermomorphogenesis**

**CHAIR:**

**Manuel Piñeiro**, *CBGP (UPM-INIA/CSIC), Spain*

**10:20-10:50**

**INVITED TALKS**

**Stephan Pollmann**

*CBGP (UPM-INIA/CSIC), Spain*

**Elucidating the Molecular Mechanisms Underlying Beneficial Plant-Fungus Interactions for Sustainable Agricultural Practices**

**Cristina Nieto**

*INIA-CSIC, Spain*

**Exploring the genetic variation in the adaptation of wheat to warm temperatures**

**Atle Bones**

*Norwegian University of Science and Technology, Norway*

**Diatom stress tolerance**

**10:50-11:40**

**COFFEE BREAK AND POSTERS SESSION (DOMO)**

**CHAIR:**

**Mar Castellano**, *CBGP (UPM-INIA/CSIC), Spain*

**11:40-12:20**

**Wolfgang Busch**

*Salk Institute for Biological Studies - San Diego, USA*

**Engineering Root Traits for Climate Change Mitigation**

**12:20-13:00**

**Jonathan Lynch**

*Huck Institute of Life Sciences, Pennsylvania State University, USA*

**Roots of the Second Green Revolution**

**13:00-13:20**

**CONCLUSIONS REMARKS AND OFFICIAL CLOSING OF PLANTACT! CONFERENCE 2025**