

IBMCP Speakers

ANTONIO SERRANO

DELLA-mediated coordination of plant growth and defence

Marie Curie Fellow
David Alabadí Lab

VICENTE BALANZÁ

Study of the regulation of the end of flowering in *Arabidopsis thaliana*
Cristina Ferrándiz Lab

BEATRIZ SABATER

Integrative and systems biology and biotechnology of microorganisms for applied agriculture

BFU2015-66073-P
Beatriz Sabater Lab

MARTA VÁZQUEZ

Plant Synthetic Biology with emphasis on standardization of genetic elements and on its application for Metabolic Engineering

Diego Orzáez Lab

GAETANO BISSOLI

Ionic homeostasis, cellular stress and genomics

BIO2016-81957-REDT

Ramón Serrano and José Gadea Labs

EUGENIO GÓMEZ

Understanding the logic of evolution of transcriptional regulatory networks

Miguel Ángel Blázquez Lab



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y Celular de Plantas

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Instituto de Biología Molecular
y Celular de Plantas

26 November 2018

Yellow Cube Hall - CPI

UPV Campus, Valencia



I IBMCP

Young Researchers

Symposium

Organized by:

Javier Agustí - Reyes Benlloch

Alberto Carbonell - Jorge Lozano

<http://www.ibmcp.upv.es>

Program

9:15-9:30 Welcome: Prof. Pablo Vera

Chair: Alberto Carbonell

9:30-10:00 **ADRIÁN VALLI** (CNB): Using synthetic plant viruses to answer biological questions

10:00-10:30 **ANTONIO SERRANO** (IBMCP): Deciphering BP function in the shoot apical meristem of Arabidopsis

10:30-11:00 **VICENTE BALANZÁ** (IBMCP): The secrets of life...in monocarpic plants: unraveling the end of flowering

11:00-11:30 Coffee Break

Chair: Reyes Benlloch

11:30-12:00 **IGOR FLÓREZ** (CRAG): An *in vivo* perspective of the roles of plant alternative respiration

12:00-12:30 **BEATRIZ SABATER** (IBMCP): Duplication: innovation or adaptation?

12:30-13:00 **MARTA VÁZQUEZ** (IBMCP): Application of new breeding techniques for Solanaceae crop improvement

13:00-13:30 **GAETANO BISSOLI** (IBMCP): Starch metabolism, QQS and H⁺-ATPases (AHA1-3) regulate each other in slow and fast responses

13:30-15:00 Lunch Break

Chair: Jorge Lozano

15:30-16:00 **ANA LÓPEZ** (CNB): Unravelling the epigenetics bases of plant immunity

16:00-16:30 **RICARDO MIR** (COMAV): TAN1 and AIR9 promote proper division plane orientation in Arabidopsis thaliana

16:30-17:00 **EUGENIO GÓMEZ** (IBMCP): COP1 destabilizes DELLA proteins independently of gibberellins in Arabidopsis

17:00-17:30 **NORMA FABREGAS** (Max Planck): Linking drought stress signaling to metabolism through LEA/DEHYDRIN interactome

17:30-17:45 Closing remarks: Javier Agustí

17:30-18:30 Happy Hour

Invited speakers

ADRIÁN VALLI



In the early stages of my research career in Argentina I studied the response of sunflowers to abiotic stresses such as draught and extreme temperatures. I did my PhD at the CNB-CSIC under the supervision of Prof. Juan Antonio García, studying the role of RNA silencing as a defense mechanism against viruses in plants.

I have also worked in collaboration with Prof. Javier Paz-Ares' group to describe a novel mechanism that regulates gene expression: *target mimicry*. I worked in Prof. Sir David Baulcombe's laboratory as a Research Associate. I was granted a **Marie-Curie Fellowship** to study **RNA silencing pathways** in Chlamydomonas. We have described the effect of mobile small RNAs in plants over the methylome and transcriptome on a wide-genome basis. Also in collaboration with two groups in Spain, we found for the first time that plant viruses take advantage of viral RNA polymerase slippage to produce out-of-frame viral factors. Based on this results, I recently got granted a project from the **JIN programme (MICINN)** that I am currently developing at the CNB-CSIC.

IGOR FLÓREZ



My research has been focused on the regulation of plant mitochondrial respiration and its interaction with photosynthesis under different environmental stresses in different model and crop species. I did my PhD and first postdoc at the Universitat de les Illes Balears under the supervision of Drs. Jaume Flexas and Miquel Ribas-Carbo.

I investigated the role and regulation of the mitochondrial electron transport chain and its interaction with different aspects of photosynthesis. From 2013, fellowships from the Catalan "**Beatriu de Pinós**" and German "**Alexander von Humboldt**" programs allowed me to work as a postdoctoral researcher at the Max Planck Institute of Molecular Plant Physiology (MPIMP). I was integrated in the Central Metabolism group led by Prof. Alisdair Fernie, where I further developed and expanded my research on plant central carbon metabolism. Since March 2017, I have been working at CRAG with a postdoctoral contract from the **Severo Ochoa Excellence Program** and more recently with a **Marie Skłodowska-Curie Individual Fellowship** contract. At CRAG, I have been working in the group of Molecular Regulation of Chloroplast Metabolism led by Prof. Manuel-Rodríguez-Concepción, with a focus on unravelling the interactions between primary and secondary (isoprenoid) metabolism.

Invited speakers

ANA LÓPEZ



I studied Biology at Alcalá de Henares University where I obtained an **undergraduate Research Fellowship**, motivating me to pursue a career in **Plant Biotechnology**. In the frame of an **I3P fellowship** (Spanish Research Council - CSIC-), I joined Prof. P. Vera's group at the Institute for Plant Molecular and Cell Biology (IBMCP, Valencia-Spain).

During my PhD, I studied the **epigenetic basis of plant immunity**, becoming fascinated about the complexity of the **plant-microbe interactions** and the importance of its understanding. At this time, I was awarded with an **EMBO Short-Term fellowship** carried out at the Washington University (Saint-Louis-USA), in a world-leading group for plant epigenetics. In 2013 I joined Prof. J. Ton's group at The University of Sheffield (UK), one of the most important groups on plant induced-resistance, consolidating the focus of my career in plant **plant-pathogen interactions controlled by epigenetic mechanisms** and their potential application in developing **alternative crop protection strategies**.

NORMA FÁBREGAS



I started my PhD in 2008 with the characterization of the vascular pattern of genetic mutants of plant Brassinosteroid (BR) hormones at the group of Dr Caño-Delgado (CSIC). I collaborated with physicists Prof Ibañes and Dr Formosa (UB) to combine experimental work with computational modelling.

As a result of this interdisciplinary approach we identified a role for BR in pro-vascular stem cell division and for Auxin influx transport in vascular differentiation and development. In the framework of her PhD, she moved 4 months to the laboratory of Prof de Vries (Wageningen University, The Netherlands), where she carried out the *in vivo* purification of the membrane BR receptor proteins.

My first postdoctoral work at the laboratory of Dr. Caño was focused on the role of BR receptors in drought stress. I worked 4 months at the laboratory of Prof Fernie (Max Planck Institute, Germany) developing metabolite-profiling experiments. They found that BR receptors trigger the production of osmoprotectant metabolites and contribute to plant drought tolerance.

Since 2017, I'm **postdoctoral researcher** at the laboratory of Prof Fernie (**Max Planck Institute, Germany**) where I'm working on the molecular characterization of LEA proteins and their involvement in the metabolic response to drought.