



# Workshop on Plant Biology 2023

Centro Residenziale Universitario di Bertinoro  
(Forlì-Cesena)  
22-24 February 2023



SOCIETA' ITALIANA di  
BIOLOGIA VEGETALE

# Workshop SIBV 2023

## Organizing and Scientific Committee

<b>Matteo Ballottari</b>	University of Verona
<b>Sara Cimini</b>	Campus Bio-Medico University of Rome
<b>Alex Costa</b>	University of Milan
<b>Anca Macovei</b>	University of Pavia
<b>Maria Manuela Rigano</b>	University of Naples Federico II
<b>Francesca Secchi</b>	University of Turin
<b>Mirko Zaffagnini</b>	University of Bologna

### Conference venue

Centro Residenziale Universitario di Bertinoro (Forli-Cesena)

### Conference Language

The official conference language is English

### Conference Dinner on February 22

Ca' de Bè – Osteria Enoteca, Piazza della Libertà, 9/b

GENERAL INFORMATION



# PROGRAMME

**Wednesday, February 22, 2023**

01:30 pm Registration and welcome buffet  
02:15 pm Workshop Opening

## **Session 1: Emerging technologies and sustainability**

*Chairs: Benedetta Bottiglione and Azzurra Di Bonaventura*

### **Invited:**

02:30 pm **Regulation of photosynthesis under fluctuating light conditions in the moss *Physcomitrium patens***  
Alessandro Alboresi, University of Padua

### **Oral Presentations:**

03:20 pm **Metabolic engineering of *Nannochloropsis oceanica* to produce astaxanthin**  
Davide Canini, University of Verona

03:35 pm **Dissecting the physiological role of the enzyme phosphoribulokinase in the green microalga *Chlamydomonas reinhardtii***  
Maria Meloni, University of Bologna

03:50 pm **Optimization of synthetical photorespiratory bypasses in *Physcomitrium patens***  
Eleonora Traverso, University of Padua

04:05 pm **Crispr/cas9-mediated genome editing: a tool to sustainably develop biofortified rice to address hidden hunger**  
Conrado Jr. Duenas, University of Pavia

04:20 pm **COFFEE BREAK**

05:00 pm **New state-of-the-art imaging tools to study how crops adapt to environmental changes: *Lycopersicon esculentum* key study**  
Bianca Maria Orlando Marchesano, University of Milan

05:15 pm **Analysis of the role and functionality of plant-derived exosome-like nanovesicles: a new research strategy and therapeutic application**  
Clarissa Zanotti, University of Rome Tor Vergata

- 05:30 pm **The use of plant cell cultures as an alternative method for the production of novel food**  
Carmen Laezza, University of Naples
- 05:45 pm **Impact of environmental conditions on lettuce seed quality**  
Francesca Messina, University of Pavia
- 06:00 pm **ELEVATOR PITCHES**
- 08:00 pm **GET TOGETHER PARTY**  
**DINNER AT CA' DE BÈ RESTAURANT**

## Thursday, February 23, 2023

### Session 2: Plant Stress Resilience and memory

*Chairs: Silvana Francesca and Francesca Resentini*

#### **Invited:**

- 09:00 am **Synthetic biology strategies to investigate plant signal transduction**  
Beatrice Giuntoli, Sant'Anna School of Advanced Studies of Pisa

#### **Oral Presentations:**

- 09:50 am **Arabidopsis NAD kinase C (NADKc): a missing link between Ca<sup>2+</sup> signaling, metabolism, and plant stress response**  
Elisa Dell'Aglio, University of Milan
- 10:05 am **Can microplastics threat plant productivity and fruit quality? Insights from MICRO-TOM and MICRO-PET/PVC**  
Marco Dainelli, University of Florence
- 10:20 am **The cAMP-dependent plant stress response**  
Eleonora Davide, University of Insubria
- 10:35 am **Can a tunisian-related olive tree be a promising candidate as *Xylella fastidiosa*-resistant plant?**  
Giambattista Carluccio, University of Salento
- 10:50 pm **COFFEE BREAK**
- 11:30 am **Involvement of GUN1 in the acquisition of basal thermotolerance in *Arabidopsis thaliana***  
Cecilia Lasorella, University of Bari

- 11:45 am **ARGONAUTE3 is involved in hypoxia tolerance in *Arabidopsis thaliana***  
Elisa De Meo, Sant'Anna School of Advanced Studies of Pisa
- 12:00 pm **Karrikin priming affects responses to drought stress in tomato**  
Cristina Morabito, University of Turin
- 12:15 pm **Phenotypical, biochemical and molecular characterization of durum wheat genotypes under salt stress**  
Irene Sbrocca, Campus Bio-Medico University of Rome
- 12:30 pm **LUNCH**

### Session 3: Plant Environment Interactions

*Chairs: Sara Natale and Matteo Grenzi*

#### **Invited:**

- 02:00 pm **Redox signaling in plant environment interactions**  
Vittoria Locato, Campus Bio-Medico University of Rome

#### **Oral Presentations:**

- 02:50 pm **Mild drought treatments prime the recovery from severe drought modifying the tradeoff between soluble non-structural carbohydrates and growth in black poplars**  
Sara Gargiulo, University of Trieste and Udine
- 03:05 pm **ISCA-LIKE 3: a putative plant magnetosensor**  
Ambra Selene Parmagnani, University of Turin
- 03:20 pm **Healthy mitochondria are needed for optimal photosynthesis: the role of respiration in plant bioenergetics and primary metabolism**  
Antoni Mateu Vera Vives, University of Padua
- 03:35 pm **AtCuAO $\beta$  and RBOHD distinct roles in mechanical wounding-induced stomatal closure**  
Chiara Pedalino, University of Roma Tre
- 03:50 pm ***Tulbaghia violacea* var. alba routinely emits high quantity of signaling GLV (Z)-3-hexenyl acetate**  
Alessandro Frontini, University of Salento
- 04:05 pm **A simple methodology to study the effects of plant nutrient homeostasis on Ca<sup>2+</sup> signaling**  
Stefano Buratti, University of Milan

- 04:20 pm **COFFEE BREAK**
- 05:00 pm **“PLANT TALKS”  
YOUNG SCIENTISTS BRAINSTORMING**
- 08:00 pm **DINNER**

**Friday, February 24, 2023**

## **Session 4: From Seed to Seed: Plant Physiology and Development**

*Chairs: Libero Gurrieri and Edoardo Tosato*

### **Invited:**

- 09:00 am **Role of biostimulants in enhancing seed germination, plant growth and abiotic stress tolerance in crops**  
Cinzia Margherita Berteà, University of Turin

### **Oral Presentations:**

- 09:50 am **Salt stress response in rice: the involvement of sulfur metabolism**  
Michela Molinari, Campus Bio-Medico University of Rome
- 10:05 am **Unveiling the functional and regulatory properties of a new class of enzyme controlling the GSNO homeostasis**  
Ginevra Peppi, University of Bologna
- 10:20 am **Water and nutritional savings shape non-structural carbohydrates in grapevine (*Vitis vinifera* L.) cuttings**  
Alessandro Pichierri, University of Trieste
- 10:35 am **COFFEE BREAK**
- 11:15 am **Impairing of lipid reservoirs mobilization in *Eruca sativa* germination under salt stress conditions**  
Emilio Corti, University of Florence
- 11:30 am **Evaluation of D27 and D27-likes genes in tomato and their potential role in fruit quality**  
Alessia Cuccurullo, University of Naples

- 11:45 am **Neighbors detection and transcriptional response, does chromatin accessibility count?**  
Alessandra Boccaccini, IRCCS-Fondazione Bietti
- 12:00 pm **ELEVATOR PITCHES**
- 01:00 pm **TALK PRIZE**  
**CONCLUDING REMARKS**
- 01:30 pm **LUNCH**

## ELEVATOR PITCHES

**February 22, 2023**

**06:00 pm - 07:00 pm**

### Session 1: Emerging Technologies and Sustainability

Benedetta Bottiglione, University of Bari

**Monochromatic led lighting affecting morphological and physiological parameters in lentil (*Lens culinaris* medik.) seedlings**

Azzurra Di Bonaventura, University of Udine

**Production of secondary metabolites from coffee spp. cell cultures**

Irene Doro, University of Padua

**Grafting as a new strategy for endophyte transferring in grapevine**

Lucia Franceschini, Campus Bio-Medico University of Rome

**Sustainable strategies to produce bioactive molecules with antiviral properties in plant cultures**

Noemi Gatti, University of Turin

**The application of a biostimulant based on tannins enhances fruit nutraceutical properties of a tomato plants cultivated under salt stress**

Shraddha Shridhar Gaonkar, University of Pavia

**Screening approaches to enhance storability of primed legume seeds**

### Session 2: Stress Resilience and Memory

Caterina Capezzali, University of Turin

**Application of abiotic stress to tomato (*Solanum lycopersicum* L.) to increase the extraction yield of secondary bio-based compounds**

Filippo Costa, University of Bologna

**Characterization of hypoxic stress effects on the symbiotic relationship between *Medicago truncatula* and *Sinorhizobium meliloti* through root transcriptome analysis**

Silvana Francesca, University of Naples "Federico II"

**Flowering time and leaf morphology traits are key for heat tolerance in one tomato genotype**

Davide Greco, University of Salento

**Crop renewal for the restoration of the agroecosystems compromised by *Xylella fastidiosa***

Michela Manai, University of Rome Tor Vergata

**Role of salt tolerance-related protein (STRP) in salt stress responses in *Arabidopsis thaliana***

Miriam Negussu, University of Florence

**Gaining insight into the drought tolerance mechanisms in chickpea**

Yuri Telara, Sant'Anna School of Advanced Studies

**Plant responses to complex environmental stresses: investigation of iron deficiency response in plants exposed to flooding**

Niccolò Tricerri, University of Turin and University School for Advanced Studies IUSS Pavia

**Impact of drought progression rate on embolism recovery in poplar**

**February 24, 2023**

**12:00 pm - 01:00 pm**

### **Session 3: Plant Environment Interactions**

Claudia Beraldo, University of Padua

**Multi-strategy study of non-photochemical quenching in the moss *Physcomitrium patens***

Silvia De Rose, University of Turin

**Plant and fungal gene expression coupled with stable isotope labelling provide novel information on sulfur uptake and metabolism in orchid mycorrhizal protocorms**

Matteo Grenzi, University of Milan

**Long-distance turgor pressure changes induce local activation of plant glutamate receptor-like channels**



Sara Natale, University of Trieste and University of Padua

**Novel approaches to study photosynthetic characteristic of chloroplasts found along the radial profile of *Fraxinus ornus* stems**

Francesca Resentini, University of Milan

**Functional characterization of the calcium-binding protein BONZA1 in *Arabidopsis thaliana***

Teodora Chiara Tonto, Campus Bio-Medico University of Rome

**Nutritional quality of tomato fruits grown under different agronomic conditions**

## **Session 4: From Seed to Seed: Plant Physiology and Development**

Giuseppe Gabellini, University of Bologna

**What's new in *Arabidopsis thaliana* nitrosylation catabolism: AKR (aldo-keto reductase) are capable to catalize the reduction of nitrosilated species**

Libero Gurrieri, University of Bologna

**Glutathionylation as determinant of stomata opening and starch degradation in guard cells**

Sara Paola Nastasi, IPSIM and University of Milan

**Ca<sup>2+</sup> levels in cytosol and tonoplast during stomatal opening**

Paola Pagano, University of Pavia

**The involvement of DNA damage response in plant stress: a snapshot into the *Arabidopsis* TDP1 genes function**

Edoardo Tosato, University of Bologna

**The molecular phenotyping of *Arabidopsis thaliana* mutants suggests a role for cytochromes b561 in the regulation of intracellular ascorbate redox homeostasis and ROS-mediated signaling**

SI RINGRAZIANO PER IL LORO CONTRIBUTO

**eppendorf**

