

WEDNESDAY 29 MAY

12:00-13:00 **Conference registration** *Espace Méditerranée - Level 3*

13:00-14:00 **Welcome Session** *Room Ella Fitzgerald - Level 3*

- Pr. Pierre FREUDO
- Representative of Town Hall
- Representative of Region
- Representative of Côte d'Azur University

14:00-15:00 **Plenary lectures**

- **The regulation of mammalian Na⁺/H⁺ exchange by superoxide. Mechanism, critical sites and consequences on cell shape and motility**
Laurent COUNILLON - CNRS LP2M, Université Côte d'Azur, Nice, France
- **Flavonol antioxidants modulate reactive oxygen species signaling to control development and modulate stress responses**
Gloria MUDAY - Wake Forest University, Winston Salem - NC, USA

15:00-17:00 **Session 1 - Redox biology (antioxidant and pro-oxidant molecules)**

Chairs: Maria ROMERO-PUERTAS & Graham NOCTOR

15:00-15:30 • **KN-1 - Plant responses to intracellular oxidative stress**
Graham NOCTOR - Université Paris Saclay, Gif-sur-Yvette, France

Oral presentations

15:30-15:50 • **S1-01 - VTC2 - Mediated light - Regulation of ascorbate biosynthesis may have been acquired by plants during their terrestrial expansion**
Takahiro ISHIKAWA - Institute of Agricultural and Life Sciences, Academic Assembly, Shimane University, Matsue, Shimane Prefecture, Japan

15:50-16:10 • **S1-02 - Subcellular redox changes in response to cadmium: Effect of light / dark cycle and disturbances in subcellular ROS production**
María C. ROMERO-PUERTAS - Department of Stress, Development and Signalling in Plants, Estación Experimental del Zaidín, CSIC, Granada, Spain

16:10-16:30 • **S1-03 - Regulatory mechanisms of glutathione metabolism involved in salt stress response in rice**
Vittoria LOCATO - Campus Bio-Medico University of Rome, Rome, Italy

16:30-16:50 • **S1-04 - Chloroplast protein selenoprotein O-Like enhances drought tolerance by modulating redox signalling in arabidopsis**
Yosef FICHMAN - School of Plant Sciences and Food Security, Tel Aviv University, Tel Aviv, Israel

16:50-17:10 • **S1-05 - Potential role of amylases' glutathionylation to control gas exchange**
Libero GURRIERI - Department of Pharmacy and Biotechnology, University of Bologna, Bologna, Italy

17:00-17:30 **Coffee break - Posters** *Espace Méditerranée - Level 3*

17:30-19:00 **Session 2 - Tools for redox biology** *Room Ella Fitzgerald - Level 3*

Chairs: Christine FOYER & Andreas MEYER

17:30-18:00 • **KN-2 - Gateways to cellular redox signalling**
Dr. Andreas MEYER - University of Bonn, Bonn, Germany

Oral presentations

- 18:00-18:20 • **S2-O1 - CysQuant: quantitative profiling of reversible cysteine oxidation and protein abundance**
 Jingjing HUANG - *Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium*
- 18:20-18:40 • **S2-O2 - Dynamic monitoring of the intracellular cysteine pool with the genetically-encoded biosensor CyReB**
 Jérémy COUTURIER - *UMR1136 UL/INRAE Interactions Arbres-Microorganismes, Université de Lorraine, Vandoeuvre-lès-Nancy, France*
- 18:40-19:00 • **S2-O3 - NAPstars, a novel NADPH:NADP⁺ fluorescent-protein biosensor family, reveal *in vivo* mechanisms of antioxidant defense and stress-triggered re-orchestration of metabolism**
 Jan-Ole NIEMEIER - *Institute for Plant Biology and Biotechnology, University Münster, Münster, Germany*

19:00-20:00 **Poster Session 1 - odd-numbered posters**

Espace Méditerranée - Level 3

Welcome Cocktail

Espace Méditerranée - Level 3



THURSDAY 30 MAY

09:00-10:30 **Session 3 - Plant growth and development** *Room Ella Fitzgerald - Level 3*

Chairs: Francisco Javier CORPAS & Oscar LORENZO SÁNCHEZ

09:00-09:30 • **KN-3 - The gasotransmitter Nitric Oxide: sensing and signalling during plant development and stress trade-off**
Oscar LORENZO SÁNCHEZ - *Spain*

Oral presentations

09:30-09:50 • **S3-01 - Role of ROS trafficking in the regulation of *Arabidopsis* seed dormancy: towards an oxidative network of seed germination**
Christophe BAILLY - *UMR7622, Sorbonne Université, Paris, France*

09:50-10:10 • **S3-02 - Deciphering nitric oxide (NO) function during seed germination and seedling establishment through the control of specific targets**
Inmaculada SANCHEZ-VICENTE - *Department of Botany and Plant Physiology, Ciale-Usal, Villamayor de Armuña (Salamanca), Spain*

10:10-10:30 • **S3-03 - An *in vitro* approach to nitric oxide production from oximes in plants**
Javier BUEZO - *Ciencias, Universidad Pública de Navarra, Mutilva, Spain*

10:30-11:00 **Coffee break - Posters** *Espace Méditerranée - Level 3*

11:00-12:20 **Session 3 - Plant growth and development (continued)** *Room Ella Fitzgerald - Level 3*

Oral presentations

11:00-11:20 • **S3-04 - CYB561-A and CYB561-B are likely involved in intracellular ascorbate redox homeostasis and ROS-mediated signalling**
Edoardo TOSATO - *Department of Pharmacy and Biotechnologies, Università di Bologna, Bologna, Italy*

11:20-11:40 • **S3-05 - Modifications in olive (*Olea europaea* L.) pollen S- and T yr- nitro-proteome profiles in response to the treatment with NO donors, and their effects on pollen performance**
Juan de Dios ALCHE - *Plant Reproductive Biology and Advanced Imaging Laboratory, Estacion Experimental del Zaidin. CSIC, Granada, Spain*

11:40-12:00 • **S3-06 - The role of copper/zinc superoxide dismutase in sexual reproduction of extant land plants**
Stephanie FROHN - *IPK Gatersleben, Gatersleben, Germany*

12:00-12:20 • **S3-07 - Seeds of Signalling: Decoding the redox dynamics of plant 1-Cys peroxiredoxins**
Ana Luiza DORIGAN de MATOS FURLANETTO - *Institute of Biology and Biotechnology of Plants, University of Münster, Münster, Germany*

12:20-12:50 **Tribute to Gary LOAKE**

• **Dr. Jagadis Gupta KAPUGANTI** - *University of New Delhi, India*

12:50-14:00 **Lunch & Coffee - Posters** *Espace Méditerranée - Level 3*

14:00-15:30 **Session 4 - Plant response to biotic stress** *Room Ella Fitzgerald - Level 3*

Chairs: Christian LINDERMAYR & Magdalena ARASIMOWICZ-JELONEK

14:00-14:30 • **KN-4 - Nitric oxide: an effective weapon of the plant or the pathogen?**
Magdalena ARASIMOWICZ-JELONEK - *Adam Mickiewicz University, Poznan, Poland*

Oral presentations

- 14:30-14:50 • **S4-O1 - *Arabidopsis thaliana* CRK8 enhances resistance against the fungal pathogen *Sclerotinia sclerotiorum* through ROS and defense pathways regulation**
Joris MACQUET - LIPME, INRAE, Castanet-Tolosan, France
- 14:50-15:10 • **S4-O2 - Evolution of singlet oxygen signalling from algae to plants**
Thomas ROACH - Universität Innsbruck, Innsbruck, Austria
- 15:10-15:30 • **S4-O3 - The Medicago truncatula NFP LysM-RLK receptor at the interface between symbiosis and immunity**
Baptiste SARRETTE - LIPME, INRAE, Auzeville, France

15:30-16:50 Session 5 - Plant response to abiotic stress

Room Ella Fitzgerald - Level 3

Chairs: Ann CUYPERS & Zsuzsanna KOLBERT

Oral presentations

- 15:30-15:50 • **S5-O1 - Unravelling functional and regulatory properties of *Arabidopsis* aldo-keto reductases in the control of nitrosoglutathione homeostasis**
Ginevra Marie Eloise PEPPI - Department of Pharmacy and Biotechnology (FaBIT), University of Bologna, Bologna, Italy
- 15:50-16:10 • **S5-O2 - Interplay between Melatonin, Nitric Oxide and ROS in Orchestrating PSII/PSI dynamics under single and combined abiotic stresses**
Rosa M. RIVERO - Department of Plant Nutrition, CEBAS-CSIC, Murcia, Spain
- 16:10-16:30 • **S5-O3 - The role of alternative oxidase in the interplay between reactive oxygen and nitrogen species under normoxic and hypoxic conditions**
Abir U. IGAMBERDIEV - Biology, Memorial University of Newfoundland, St. John's, NL, Canada
- 16:30-16:50 • **S5-O4 - Redox regulation of RNaseIII proteins in response to environmental stresses in *Arabidopsis thaliana***
Juline AUVERLOT - Laboratoire Génome et Développement des Plantes, CNRS/UPVD, Perpignan, France

16:50-17:20 Coffee break

Espace Méditerranée - Level 3

17:20-19:20 Poster Session 2 - even-numbered posters

Espace Méditerranée - Level 3

19:30 Conference Dinner

Villa Eilenroc - Antibes



FRIDAY 31 MAY

09:00-10:30 **Session 5 - Plant response to abiotic stress (continued)** Room Ella Fitzgerald - Level 3

Chairs: Ann CUYPERS & Zsuzsanna KOLBERT

09:00-09:30 • **KN-5 - Plant naNObiology: Nitric oxide metabolism and signaling in responses to nanomaterials**
Zsuzsanna KOLBERT - University of Szeged, Szeged, Hungary

Oral presentations

09:30-09:50 • **S5-O5 - Surfing the ROS Wave: HDA6's journey through heat stress adaptation, from chromatin to cytosolic stress granules. Unveiling redox-regulation of protein phase separation**
Avilien DARD - Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium

09:50-10:10 • **S5-O6 - Transcriptional complex formation by superoxide dismutase in plants**
Jos SCHIPPERS - Molecular Genetics, Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany

10:10-10:30 • **S5-O7 - Activation of a lipid carbonyl detoxification pathway in plant acclimation to chronic oxidative stress**
Michel HAVAUX - UMR7265 CNRS-CEA-Aix Marseille University, Bioscience and Biotechnology Institute of Aix-Marseille, Saint-Paul-lez-Durance, France

10:30-11:00 **Coffee break - Posters** Espace Méditerranée - Level 3

11:00-13:00 **Session 5 - Plant response to abiotic stress (continued)** Room Ella Fitzgerald - Level 3

Oral presentations

11:00-11:20 • **S5-O8 - Ethylene signalling affects the redox environment and organellar stress responses during cadmium stress in *Arabidopsis thaliana***
Isabeau VANBUEL - Centre for Environmental Sciences, UHasselt - Hasselt University, Diepenbeek, Belgium

11:20-11:40 • **S5-O9 - Ribosomal profiling unveils cell-specific ROS signalling in PCD in *Arabidopsis* under ozone treatment**
Bikash BARAL - Organismal and Evolutionary Biology Research Programme, University of Helsinki, Helsinki, Finland

11:40-12:00 • **S5-O10 - Capturing transcriptional responses to excess light across leaf cell types using single cell RNA-sequencing**
Patrick WILLEMS - VIB UGent Center for Plant Systems Biology, Ghent, Belgium

12:00-12:20 • **S5-O11 - Identification and functional characterization of S-nitrosated proteins during salt stress in *Klebsormidium nitens***
Zoé CHAUDRON - UMR Agroécologie, INRAe, CNRS, Institut Agro, Université de Bourgogne, Dijon, France

12:20-12:40 • **S5-O12 - Hydrogen sulfide, protein persulfidation and redox regulation in guard cell ABA signalling**
Mngjian ZHOU - Department of Plant Biotechnology and Bioinformatics, Ghent University, Technologiepark 71, Ghent, Belgium

12:40-13:00 • **S5-O13 - Hypoxia-induced increase in GABA content is essential for preventing ROS-induced disturbance to ion homeostasis**
Sergey SHABALA - University of Western Australia, Perth, WA, Australia

13:00-14:00 **Lunch & Coffee - Posters** Espace Méditerranée - Level 3

14:00-15:00 **Closing Session** Room Ella Fitzgerald - Level 3

• Pr. Pierre FREUDO