Plant Oxygen Group program within the Joint SFRR-E/POG "Redox Biology Congress 2022"

August 24-26th - Oude Vismijn, Ghent, BELGIUM

Joint Keynote Lectures

Ron MITTLER, University of Missouri, USA.
"ROS and redox signaling in cell-to-cell and systemic responses of plants"

Helmut SIES, University of Kaiserslautern, Germany.
"Physiological redox balance: Oxidative eustress"

Joint Thematic Sessions with SFRR-E

C'ing is B'lieving: Biosensors to trace redox metabolites.

Chairs: Joris Messens and Bruce Morgan.

Bruce MORGAN, Saarland University, Germany.
"Novel H2O2 and NADPH probes to dissect subcellular redox processes in plants"

Alison TEBO, Howard Hughes Medical Institute, USA.
"Imaging cellular biochemistry using chemical-genetic tools"

Joachim GOEDHART, University of Amsterdam, The Netherlands.
"Quantitative imaging of signaling with genetically encoded biosensors to study signaling in plants, yeast and human cells"

Markus SCHWARZLÄNDER, WWU Münster, Germany.
"Dissecting the dynamics of major cytosolic redox systems under low oxygen stress"

Redox signaling and antioxidants in plants and human health.

Chairs: Frank Van Breusegem and Joël Pincemail.

Nicholas SMIRNOFF, University of Exeter, UK.
"Shining a light on ascorbate metabolism"

Karl-Josef DIETZ, Bielefeld University, Germany.
"Thiol peroxidases in plant redox sensing and metabolic tuning"

Anna BORONAT, Pompeu Fabra University, Barcelona, Spain.
"Hydroxytyrosol formation from Tyrosol and its effects on the cardiovascular system: results from a randomized controlled clinical trial"

Jan Frederik STEVENS, Oregon State University, USA.
"Hop polyphenols for mitigating metabolic syndrome"

Plant Oxygen Group Sessions

Opening Lecture

Marc VAN MONTAGU, Ghent University, Belgium.
"Lessons learned from plant evolution"

Session 1: Concepts and directions in redox signaling research in plants

Christine H. FOYER, University of Birmingham, UK.
"Roles for redox processes in adaptation to a high CO_2 world"

Szilvia Z. TOTH, Biological Research Centre, Szeged, Hungary.
"Chloroplastic ascorbate content is a modulator of the plant metabolome"

Jérémy COUTURIER, Université de Lorraine, France.
"3-mercaptopyruvate sulfurtransferases: new actors in sulfur trafficking and H2S mediated-redox signaling in plants?"

Patrick WILLEMS, Ghent University, Belgium.
"Monitoring the degree of cysteine oxidation using data-independent acquisition"

Session 2: ROS, RNS and redox-active gases in development and plant physiology

Romy SCHMIDT, University of Bielefeld, Germany.
"Integration of redox signals into hypoxia signaling in Arabidopsis thaliana"

Eliana MOLINA MOYA, Estación Experimental del Zaidín (CSIC), Granada, Spain.
"NO and Phytoglobins role in Arabidopsis-Fusarium oxysporum interaction"

Yosef FICHMAN, University of Missouri, USA.
"Phytochrome B regulates reactive oxygen signaling during abiotic and biotic stress in plants"

Gad MILLER, Bar Ilan University, Israel.
"Pollen fertility and the role of ROS and redox homeostasis in heat stress tolerance during sexual reproduction"

Stanisław KARPINSKI, Warsaw University of Life Sciences (SGGW), Poland.
"Aboveground plant-to-plant electrical signaling and ROS waves regulates network and systemic acquired acclimation"

Session 3: Redox signaling in the abiotic stress response of plants

Ann CUYPERS, University of Hasselt, Belgium.
"The cellular redox status and signal transduction in cadmium-induced acclimation responses"

Triin VAHISALU, University of Helsinki, Finland.
"OZ.26 is a novel receptor central for plant abiotic and biotic stress tolerance"

Jean-Philippe REICHHELD, CNRS UMR5096, Perpignan, France.
"Glutathione-mediated redox regulation of plant response to high temperature"

Session 4: Redox signaling in (a)biotic stress responses

Gary LOAKE, University of Edinburgh, UK.
"S-nitrosylation regulates immunity against infection across life kingdoms"

Laura ZSIGMOND, Biological Research Centre, Szeged, Hungary.
"Characterization of mitochondrial electron transport mutants under stress conditions"

Pablo ALBERTOS, University of Salamanca, Spain.
"ANAC089 transcription factor is an ABA and redox molecular player during seed germination and stress"

José Manuel UGALDE, University of Bonn, Germany.
"Endoplasmic reticulum oxidoreductin (ERO) provides resilience against reductive stress and hypoxic conditions by mediating luminal redox dynamics"

Sabine LÜTHJE, University of Hamburg, Germany.
"Cellular responses of maize roots to long-term cadmium exposure: Alterations in class III peroxidases, tonoplast and plasma membrane sub-proteomes"

Session 5: Oxidative stress in algae and symbiotic organisms

M. Esther PEREZ-PEREZ, University of Sevilla, Spain.
"New insights into the redox regulation of autophagy in the single-cell microalga *Chlamydomonas reinhardtii*"

Anna CACCAMO, University of Liege, Belgium.
"Ascorbate peroxidase 2 of Chlamydomonas reinhardtii is involved in the regulation of the plastocyanin levels"

Stéphane ROBERTY, University of Liege, Belgium.
"Influence of nitrogen availability and form on sensitivity to heat and light stress in coral endosymbionts"

Pierre FRENDO, Université Côte d'Azur, France.
"Redox-sensitive fluorescent biosensors detect the symbiotic bacteria Sinorhizobium meliloti intracellular redox changes under free-living and symbiotic lifestyles"

Session 6: Reactive oxygen species and organellar signaling

Olivier VAN AKEN, University of Lund, Sweden.
"The different ways in which plants (try to) keep a happy mitochondrial pool"

Su-Mai YU, Academia Sinica, China.
"Mitochondrial retrograde signaling regulates hypoxia tolerance in rice"

Finja BOHLE, Technical University Kaiserslautern, Germany.
"Chloroplasts lacking class I glutaredoxins - Unraveling the function of GRXC5 in Physcomitrium patens"

Linda DE BONT, Université de Lorraine, France.
"Redox properties of the plant atypical thioredoxin DCC1"

Inge DE CLERCQ, Ghent University, Belgium.
"Interactomics and chemical genomics-based approaches for the elucidation of mitochondrial retrograde signaling pathways"

Session 7: ROS/RNS signaling in the nucleus

Alison BAKER, University of Leeds, UK.

"Nuclear targeting of catalase in Arabidopsis"

Avilien DARD, Université de Perpignan Via Domitia, France.

"Redox regulation of histone acetylation in response to environmental stress in A. Thaliana"

Christian LINDERMAYR, Institute of Biochemical Plant Pathology, Munich, Germany.

"Redox-Regulation of Histone Deacetylation in Arabidopsis thaliana"

Session 8: Plant antioxidative systems

María C. ROMERO-PUERTAS, University of Granada, Spain.
"Peroxisome-derived retrograde signalling and dynamics"

Stephanie FROHN, IPK Gatersleben, Germany.
"Evolutionary conserved and diverged responses to copper zinc superoxide dismutase inhibition"

Sophie HENDRIX, University of Bonn, Germany.
"Unravelling plant responses to heat stress using genetically encoded biosensors"

Cilian KOCK, University Osnabrück, Germany.
"Redox dynamics in meristematic tissue of the liverwort Marchantia polymorpha"

Amna MHAMDI, University of Ghent, Belgium.
"EAL4 methyltransferase plays a specific role in response to oxidative stress"

Joint Sunrise Seminars

"How to write a competitive grant application"

"How to write a great scientific paper, and getting it accepted"

Poster and Pitch Sessions

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