

WEDNESDAY, JUNE 21

OCC World Congress and Annual SFRR-E Conference 2017

METABOLIC STRESS AND REDOX REGULATION

[Radisson Blu Hotel, Berlin](#), June 21-23, 2017, Room Saphir

08:30 -10:30 SFRR-E EXECUTIVE COMMITTEE MEETING

10:30-12:30 SFRR-E COUNCIL MEETING

10:00-13:00 **REGISTRATION**

13:00-13:30 **WELCOME**

Tilman Grune (Organizer)

Helmut Sies (Organizer)

Dean P. Jones (OCC President)

Josiane Cillard (SFRR-Europe President)

13:30-14:15 **SFRR-E BASIC SCIENCE AWARD LECTURE**

Chairs: Josianne Cillard, Tilman Grune

Mechanisms of Redox Signal Propagation (L 01)

Tobias Dick

Division of Redox Regulation, German Cancer Research Center, Heidelberg, Germany

14:15-15:00 **SFRR-E CATHERINE PASQUIER AWARD LECTURE**

Chairs: Michael Davies, Regina Brigelius Flohé, Giuseppe Poli

Selenium and Selenoproteins in Redox Signaling (L 02)

Anna Kipp

Friedrich Schiller University Jena, Germany

The Silver Lining of Cerebrosterol in Alzheimer's Disease: the Involvement of Sirtuin 1 in Neuroprotection (L 03)

Paola Gamba

Department of Clinical and Biological Sciences, University of Turin, Orbassano, Turin, Italy

15:00-15:30 **COFFEE/DRINKS**

SESSION I AGING AND REDOX SIGNALS

Chairs: Annika Höhn, Malcolm Jackson

15:30-15:50 **Treatment of Sarcopenia by Targeting Akt- and Muscle-specific Ubiquitin Ligases. Evidence from Mice and from a Clinical Trial (OP 01)**

José Viña

Department of Physiology, University of Valencia, Valencia, Spain

15:50-16:10 **Reactive oxygen species in tissue repair and its disorders (OP 02)**

Karin Scharffetter-Kochanek

Department of Dermatology and Allergic Diseases, University of Ulm, Ulm, Germany

16:10-16:30 **Modulation of Parkin-dependent Mitophagy, and Mitochondrial Health (OP 03)**

Antonio Zorzano

Institute for Research in Biomedicine (IRB Barcelona), Barcelona Institute for Science and Technology, Barcelona, Spain

16:30-16:50 **Redox Signals in Healthspan and Metabolic Disease (OP 04)**

Michael Ristow

Energy Metabolism Laboratory, Swiss Federal Institute of Technology, Zurich, Switzerland

16:50-17:20 **COFFEE/DRINKS**

SESSION II REDOX SIGNALING AND TRANSCRIPTION

Chairs: Hüveyda Başağa, Helen Griffiths

17:20-17:40 **Mitochondrial network responses in oxidative physiology and disease (OP 05)**

Dean P. Jones

Department of Medicine, Emory University, Atlanta, Georgia

17:40-18:00 **Redox Regulation of FOXO Transcription Factors - Role of Glutathione (OP 06)**

Lars-Oliver Klotz

Institute of Nutrition, Department of Nutrigenomics, Friedrich-Schiller University Jena, Jena, Germany

18:00-18:20 **Delayed Antioxidant Enzyme Increases Induced by Nanoparticles are Mediated by NF-kappa B (OP 07)**

Henry J. Forman

School of Gerontology, University of Southern California, Los Angeles, CA, USA

18:20-18:40 **Recapitulating physiological normoxia *in vitro* to discriminate Nrf2 regulated gene transcription (OP 08)**

Giovanni E. Mann

Cardiovascular Division, BHF Centre of Research Excellence, Faculty of Life and Health Sciences, King's College London, London, UK

19:00-21:00 **WELCOME RECEPTION, POSTERS, AND EXHIBITION**

THURSDAY, JUNE 22

07:45-08:30 **EARLY MORNING SCHOOL**

Measurement of reactive sulfur: chemical, biological, and clinical implications

Christopher Kevil

Department of Pathology, Louisiana State University Health Sciences Center, Shreveport, LA, USA

08:30 - 09:15 **SFRR-E ANNUAL AWARD LECTURE**

Chairs: Juan Sastre, Cesar Fraga

Protein Oxidation: Beyond the Cell (L 04)

Michael J. Davies

Cellular and Metabolic Research Section, University of Copenhagen, Denmark

09:15 - 10:00 **VITAMIN E FORUM**

Chairs: Juan Sastre, Cesar Fraga

Global Vitamin A and E status - Perspectives for Nutrition (L 05)

Manfred Eggendorfer

DSM Nutritional Products, Basel, Switzerland, and University of Groningen, Netherlands

Vitamin E deficiency causes a metabolic reprogramming dysregulating cellular energy homeostasis (L 06)

Maret G. Traber

Linus Pauling Institute, Oregon State University, Corvallis, OR, USA

10:00-10:30 **COFFEE/DRINKS**

THURSDAY, JUNE 22

SESSION III REDOX REGULATION OF PROTEOSTASIS

Chairs: José Castro, Ralf Brandes

10:30-10:50 **Oxidized Protein Homeostasis: Implication of Circadian Rhythm, Oxidative Stress, and Ageing (OP 09)**

Bertrand Friguet

Biological Adaptation and Ageing-IBPS, Sorbonne Université, Paris, France

10:50-11:10 **Importance of The Mitochondrial Lon Protease in Age- and Sex-Specific Adaptation to Oxidative Stress (OP 10)**

Kelvin J.A. Davies

School of Gerontology, University of Southern California, Los Angeles, CA, USA

11:10-11:30 **Diet Constituents as Proteasome Activators: A Promising Strategy Against Aging and Aggregation (OP 11)**

Niki Chondrogianni

Institute of Biology, Medicinal Chemistry and Biotechnology, National Hellenic Research Foundation, Athens, Greece

11:30 -11:50 **Thiol- and Heme-dependent Peroxide Detoxification Enzymes in Pathogens: Role in Infectivity and Virulence (OP 12)**

Rafael Radi

Departamento de Bioquímica, Facultad de Medicina, Universidad de la República, Montevideo, Uruguay

11:50-12:10 **The Role of Macroautophagy in Senescent Cells and Aged Tissue (OP 13)**

Christiane Ott

Department of Molecular Toxicology, German Institute of Human Nutrition Potsdam-Rehbrücke, Nuthetal, Germany

**12:10-14:00 POSTERS, EXHIBITION, AND LUNCH
YOUNG INVESTIGATOR LUNCH SESSION**

THURSDAY, JUNE 22

12:45-13:45 YOUNG INVESTIGATOR LUNCH SESSION

Chairs: Daniela Caporossi, Patricia Oteiza

12:45-12:57 Identification of potentially therapeutic short cyclic peptides against protein misfolding diseases (YO 01)

Dafni Chrysanthi Delivoria

Institute of Biology, Medicinal Chemistry and Biotechnology, National Hellenic Research Foundation, Athens, Greece

12:57-13:09 Inhibition of the mitochondrial thioredoxin system by three metal-organic tamoxifen derivatives determines a redox imbalance inducing apoptosis in Jurkat cells (YO 02)

Valeria Scalcon

University of Padova, Department of Biomedical sciences, Padova, Italy

13:09-13:21 Acute pancreatitis and cystinosis as experimental models of disulfide stress characterized by protein cysteinylolation (YO 03)

Isabella Finamor

Department of Physiology, Faculty of Pharmacy, University of Valencia, Burjassot, Valencia, Spain

13:21-13:33 Full basal transactivation activity of FOXO1 depends on its Cys612 (YO 04)

Dimitrios Tsitsipatis

Friedrich Schiller University Jena, Germany

13:33-13:45 Long-term contribution of Nrf2 to behavioral recovery following focal cerebral ischemia-reperfusion injury (YO 05)

Keith Farrell-Dillon

King's College London, United Kingdom

THURSDAY, JUNE 22

SESSION IV REDOX CONTROL IN DISEASE

Chairs: Katrin Schröder, Corinne Spickett

- 14:00-14:20 **Ferroptotic Cell Death: Does the Iron Go "Wild" or Stay Enzymatically Controlled? (OP 14)**
Valerian Kagan
Department of Environmental and Occupational health, University of Pittsburgh, Pittsburgh, PA, USA
- 14:20-14:40 **Tocotrienols Induce the Expression of Specific miRNA in Breast Cancer Cells (OP 15)**
Fabio Virgili
National Research Institute for Food and Nutrition, Rome, Italy
- 14:40-15:00 **Role of Glutathione Biosynthesis in Endothelial Dysfunction and Fibrosis (OP 16)**
Santiago Lamas
Department of Cell Biology and Immunology, Centro de Biología Molecular "Severo Ochoa" (CBMSO), Madrid, Spain
- 15:00-15:20 **Tea Extracts-induced Liver Injury: Lipotoxic Interaction Between Lipids and Polyphenols (OP 17)**
Oren Tirosh
Institute of Biochemistry, Food Science and Nutrition, The Hebrew University of Jerusalem, Israel
- 15:20-15:50 **COFFEE/DRINKS**

THURSDAY, JUNE 22

SESSION V THIOL SWITCHES

Chairs: Tobias Dick, Anna Kipp

15:50-16:10 **Molecular Mechanisms of Regulated Cell Patterning by the Mammalian Thioredoxin System (OP 18)**

Elias S. Arnér

Division of Biochemistry, Department of Medical Biochemistry and Biophysics, Karolinska Institute, Stockholm, Sweden

16:10-16:30 **Localized Hydrogen Peroxide Metabolism and Cardiovascular Signal Transduction (OP 19)**

Thomas Michel

Cardiovascular Division, Harvard Medical School, Boston, USA

SPP1710 “THIOL SWITCHES” SPECIAL SESSION

16:30-16:50 **Mitochondrial ROS and Ageing (OP 20)**

Alberto Sanz

Institute for Cell and Molecular Biosciences & Institute for Ageing Newcastle University, Newcastle upon Tyne, UK

16:50-17:10 **Metabolic Adaptation to Oxidative Stress (OP 21)**

Markus Ralser

Molecular Biology of Metabolism Laboratory University of Cambridge and The Francis Crick Institute, London, UK

17:10-18:30 **POSTERS & EXHIBITION**

17:30-18:30 **SFRR-E GENERAL ASSEMBLY MEETING**

FRIDAY, JUNE 23

08:30-09:15 **OCC KEYNOTE LECTURE**
Chairs: Tilman Grune, Giovanni Mann

RNA as a regulator of gene expression in our brain: from circular RNAs to single cell sequencing (L 07)

Nikolaus Rajewsky

Systems Biology of Gene Regulatory Elements, ax Delbrück Center for Molecular Medicine Berlin-Buch, Germany

09:15-10:00 **SFRR-E CLINICAL SCIENCE AWARD LECTURE**
Chairs: Tilman Grune, Giovanni Mann

Signaling by Oxidized Lipids in Acute Brain Injury (L 08)

Hülya Bayır

Department of Critical Care Medicine, Children's Hospital of Pittsburgh, University of Pittsburgh, Pittsburgh, PA, USA

10:00-10:30 **COFFEE/DRINKS**

FRIDAY, JUNE 23

SESSION VI MITOCHONDRIA AND INFLAMMATION

Chairs: Enrique Cadenas, Gerald Rimbach

- 10:30-10:50 **Chronic Hypoxic Stress and Mitochondrial Responses (OP 22)**
Bernhard Brüne
Faculty of Medicine, Institute of Biochemistry I – Pathobiochemistry, Goethe-University Frankfurt, Frankfurt, Germany
- 10:50-11:10 **Horizontal mitochondrial transfer and tumor initiation (OP 23)**
Jiri Neuzil
School of Medical Science, Griffith University, Brisbane, Australia
- 11:10-11:30 **Novel Dysregulation of Mitochondria Impacts Brain Insulin Signaling (OP 24)**
Andre Kleinridders
Junior Research Group Central Regulation of Metabolism, German Institute of Human Nutrition Potsdam-Rehbrücke, Nuthetal, Germany
- 11:30 -11:50 **Evaluation of Cytokine Suppressive Anti-inflammatory Drugs (CSAIDs) in a Mouse Model of Chronic Neuroinflammation (OP 25)**
Gerald Münch
Department of Pharmacology, School of Medicine, Western Sydney University, Campbelltown, Australia
- 11:50-12:10 **Regulation of Neurovascular Coupling in the Brain by Nitrite (OP 26)**
João Laranjinha
Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal
- 12:10-14:00 **POSTERS, EXHIBITIONS, AND LUNCH**
YOUNG INVESTIGATOR LUNCH SESSION

FRIDAY, JUNE 23

12:45-13:45 YOUNG INVESTIGATOR LUNCH SESSION

Chairs: Daniela Caporossi, Patricia Oteizia

12:45-12:57 Collagen modifications by methylglyoxal and their impact on cell functionality and aging (YO 06)

Kerstin Nowotny

German Institute of Human Nutrition Potsdam-Rehbrücke (DIfE), Department of Molecular Toxicology, Nuthetal, Germany

12:57-13:09 Alpha-(13'-hydroxy)-6-hydroxychroman, the main product of alpha-tocopherol metabolism in human hepatocytes, regulates CYP4F2 and PPAR- γ expression (YO 07)

Pierangelo Torquato

Department of Pharmaceutical Sciences, University of Perugia, Italy

13:09-13:21 Detection and Characterization of Oxidative Modifications to Extracellular Matrix Proteins (YO 08)

Tina Nybo

Department of Biomedical Sciences, University of Copenhagen, Copenhagen

13:21-13:33 Genetic screen of *Arabidopsis cat2* suppressor mutants to understand the signaling pathways leading to photorespiratory H₂O₂-induced cell death (YO 09)

Aleksandra Lewandowska

VIB-UGent Center for Plant Systems Biology, 9052 Gent, Belgium

13:33-13:45 ROS is the boss (YO 10)

Jonas Hahn

Department of Medicine 3, University of Erlangen-Nuremberg, Erlangen, Germany

FRIDAY, JUNE 23

SESSION VII METABOLIC STRESS, NEURODEGENERATION, AND AGING

Chairs: André Kleinridders, Henry J. Forman

- 14:00-14:20 **Cellular Senescence: At the Nexus of Mechanisms of Age- and Obesity-Related Metabolic Dysfunction** (OP 27)
James L. Kirkland
Robert and Arlene Kogod Center on Aging, Mayo Clinic, Rochester, USA
- 14:20-14:40 **The Role of the Adipocytic Lineages in the Development of Age-related Metabolic Disorders** (OP 28)
Tim J. Schulz
Department of Adipocyte Development and Nutrition, German Institute of Human Nutrition Potsdam-Rehbrücke, Nuthetal, Germany
- 14:40-15:00 **Brain glucose metabolism in obesity** (OP 29)
Jens C. Brüning
Neuronal Control of Metabolism, Max-Planck-Institute for Metabolism Research, Cologne, Germany
- 15:00-15:20 **Protective Effects of Fat-1 Gene Against UVB-induced Oxidative Stress and Inflammation in Mouse Skin** (OP 30)
Young-Joon Surh
Tumor Microenvironment Global Core Research Center, Seoul National University, South Korea
- 15:20-15:50 **COFFEE/DRINKS**

FRIDAY, JUNE 23

SESSION VIII OXIDATIVE DAMAGE IN DISEASE

Chairs: Holger Steinbrenner, Nesrin Kartal-Özer

15:50-16:10 **Protein Oxidation and Protein Redox Interactions in Metabolic and Inflammatory Diseases (OP 31)**

Corinne Spickett

Aston University (Birmingham), Health and Life Sciences, UK

16:10-16:30 **4-Hydroxynonenal as Biomarker of Redox Regulation in Pathophysiology of Metabolic Stress (OP 32)**

Neven Žarković

Laboratory for Oxidative Stress, Rudjer Boskovic Institute, Zagreb, Croatia

16:30-16:50 **Lipid Peroxidation, Lipohormesis and Lipotoxicity in Diabetes (OP 33)**

Shlomo Sasson

Institute for Drug Research, School of Pharmacy, The Hebrew University of Jerusalem, Jerusalem, Israel

16:50-17:10 **Oxysterols, Metalloproteinases, and Atherosclerotic Plaque Rupture (OP 34)**

Guiseppe Poli

Department of Clinical and Biological Sciences, University of Torino, Torino, Italy

17:10-17:30 **CONCLUDING REMARKS**

Tilman Grune (Organizer)

Helmut Sies (Organizer)

from 19:00 **CONFERENCE DINNER , POSTER PRIZES AND AWARDS**

[At Hamburger Bahnhof – Museum für Gegenwart Berlin](#)
(Museum for Contemporary Art)

Invalidenstraße 50-51, 10557 Berlin