INTERNATIONAL SOCIETY OF ANTIOXIDANTS

21st ISANH International Conference on

Oxidative Stress Reduction, Redox Homeostasis & Antioxidants

AGENDA

June 20-21, 2019 | Université Pierre et Marie Curie, Paris, France

INTERNATIONAL SOCIETY OF ANTIOXIDANTS

UNIVERSITÉ PARIS DESCARTES

institut cochin CENTRE DE RECHERCHE

Inserm
Institut national de la santé et de la recherche médicale

www.isanh.net

Dear Colleagues,

It is our great pleasure to present you the **21st International Conference on Oxidative Stress Reduction, Redox Homeostasis and Antioxidants - Paris Redox 2019 –** which will be organized at University Pierre et Marie Curie, Paris, France in June 20-21, 2019.

During Paris Redox World Congress 2019, we will discuss the role of antioxidants as modulators of redox signaling pathways rather than players that counteract oxidative stress. Furthermore, we will analyze the mechanisms by which cells respond to oxidative stress and prevent cell damage and cell death. We will also highlight oxidative stress evaluation and discuss the recent advances on biomarkers, related to redox alteration. To understand mechanisms of redox control and their role in oxidative stress pathologies and aging, it is necessary to identify and dissect the function of the key players of redox processes.

Paris Redox 2019 aims to make an important contribution towards a better understanding of redox control in physiological and pathological states that will lead to new therapeutic and disease-preventive agents.

Among the strategic topics which will be discussed:

- *Redox 2019: Advances, Mechanistic and Perspectives*
- *Oxidative stress, Mitochondria and Microbiota*
- *Oxidative stress implications in diseases*
- *Redox 2019 Innovations*
- *Paris Redox Scientific & Innovation Awards 2019*

A round table discussion will be organized to discuss:

- *Do we need to modify Redox Science Terminology: From ROS to Reactive Species Interactome?*
- *Redox 2020: Where is the Next Target?*

We look forward to meeting you in Paris for this exciting program in June.

Prof. Frédéric Batteux

Institut Cochin, Inserm U1016, University Paris Descartes, France

President of Paris Redox 2019

21st ISANH International Conference on

Oxidative Stress Reduction, Redox Homeostasis & Antioxidants

PARIS REDOX 2019

June 20 - 21, 2019 - University Pierre and Marie Curie - Paris, France

Call for Abstracts

Short oral presentation: May 20

Poster presentation: June 7

Early Bird Registration

Register & Save Before *June 4*

Discussion & Scientific - Innovation Awards

Do we need to modify Redox Science Terminology

Redox 2020: Where is the Next Target

Paris Redox Scientific & Innovation Awards 2019

PARIS REDOX SPEAKERS

Redox 2019 : Today & Tomorrow

Pedro Buc Calderon, University of Louvain, Belgium

Recent advances on the neuroprotective role of the novel TLDC proteins against oxidative stress

Mattéa Finelli, University of Oxford, United Kingdom

KEAP1-NRF2 Antioxidative stress response system

Masayuki Yamamoto,
Tohoku University Graduate School of Medicine, Japan

Reactive Sulfide Species: An emerging paradigm in redox biology

Kenneth R. Olson, Indiana University School of Medicine USA

Uric acid, a major energy regulator of the cell turning into a killer of pancreatic beta-cells

Andrew Bahn, University of Otago, New Zealand

Phagocyte NADPH oxidase, oxidative stress and lipids: anti or pro ageing

Chantal Houée, Université Paris Sud, France

Metabolic switches saving mitochondria from oxidative stress

Carsten Culmsee, Philipps-Universität Marburg, Germany

Redox and Microbiota: Effects of Antioxidants

Jamila Faivre, INSERM, Paul-Brousse University Hospital, France

Lipid Peroxidation & Ferroptosis: Recent advances & Perspective

Sebastian Doll, Helmholtz Zentrum Münche, Germany

Redox and Other Metabolic Disorders Associated with Autism

Richard Frye, Phoenix Children's Hospital, USA

Chemogenetic approaches to dissect redox stress pathways in the cardiovascular system

Thomas Michel, Harvard Medical School, USA

Introduction on the Signaling Pathway & Redox

Paul-Henri Romeo, University of Paris Diderot, France

Dynamic Relationship between the reactive species interactome and bioenergetic metabolism in Brain

Laurent Chatre, CNRS, University of Caen-Normandie, France

Hypoxia and iron homeostasis: Recent Advances and perspective

Carole Peyssonnaux, INSERM, Université Paris Descartes, France

Commensal microbiota induced redox signaling activates proliferative signals in the intestinal stem cell microenvironment

Rheinallt M. Jones, Emory University School of Medicine, USA

Myeloperoxidase, oxidative stress and diseases-can we stop it

Semira Galijasevic, Sarajevo Medical School, Bosnia

Different roles of specific ROS in regulation of myogenic contractions in microarterioles

Christopher Wilcox, Georgetown University, USA

Nrf2 in Duchenne muscular dystrophy

Jozef Dulak, Jagiellonian University, Poland

Lipoic acid for treating multiple sclerosis

Dennis Bourdette, Oregon Health & Science University, USA

Thiosulfate as a therapeutic option in Redox diseases

Harry van Goor, University Medical Center Groningen, The Netherlands

UNIVERSITÉ PARIS DESCARTES

institut cochin CENTRE DE RECHERCHE

INTERNATIONAL SOCIETY OF ANTIOXIDANTS

Inserm Institut national de la santé et de la recherche médicale

www.isanh.net

Paris Redox 2019

21st International Conference on

Oxidative Stress Reduction, Redox Homeostasis & Antioxidants

June 20-21, 2019 - Université Pierre & Marie Curie, Paris, France

Day 1 - June 20, 2019

07:45 **Welcoming & Registration of Attendees**

08:20 **Opening of Paris Redox World Conference**
Frédéric Batteux, *President of Paris Redox 2019, Institut Cochin - University Paris Descartes, France*
Marvin Edeas, *Chairman of Paris Redox 2019, Institut Cochin - University Paris Descartes, France*

08:30 **Introduction to Redox 2019: Today & Tomorrow**
Pedro Buc Calderon, *University of Louvain, Belgium*

08:50 **Honorary Lecture: Reactive Sulfide Species: An emerging paradigm in Redox Biology**
Kenneth R. Olson*, Professor of Physiology at Indiana University School of Medicine - South Bend, USA*

Session 1 – Redox 2019: Advances, Mechanistic and Perspectives

Chairs: Frédéric Batteux, Marvin Edeas

09:10 **Different roles of specific ROS in regulation of myogenic contractions in microarterioles**
Christopher Wilcox*, Georgetown University, USA*

09:30 **Chemogenetic approaches to dissect redox stress pathways in the cardiovascular system**
Thomas Michel*, Harvard Medical School, USA*

09:50 **Introduction on the Signaling Pathway & Redox**
Paul-Henri Romeo*, University of Paris Diderot, France*

10:00 **Keap1-Nrf2 Antioxidative stress response system**
Masayuki Yamamoto*, Tohoku University Graduate School of Medicine, Japan*

10:20 **Short oral presentations**

Targeting Nrf2-mediated redox signaling inhibits cancer cells growth in vitro and in vivo
Venugopal R. Bovilla*, JSS Academy of higher Education & Research, India*

PPAR-Gamma activation can improve NRF2–redox regulation, Nitric Oxid-bioavailability and risk biomarkers in hypertension
Ima Dovinova*, Centre of Experimental Medicine, Slovak Academy of Science, Slovak Republic*

10:40 Coffee Break & Poster Session

Chairs*:* Paul-Henri Romeo, Masayuki Yamamoto

11:15 **Nrf2 in Duchenne muscular dystrophy**
Jozef Dulak*, Jagiellonian University, Poland*

11:35 **Uric acid, a major energy regulator of the cell turning into a killer of pancreatic beta-cells**
Andrew Bahn*, University of Otago, New Zealand*

11:55 **Ferroptosis, a cell death modality caused by lipid peroxidation**
Sebastian Doll*, Helmholtz Zentrum Münche, Germany*

12:15 **Short oral presentations** (7 minutes for presentation + 3 minutes for questions)

HDAC8 is modulated by a redox-switch
Franz-Josef Meyer-Almes*, University of Applied Sciences Darmstadt, Germany*

Reactive oxygen species formation and coenzyme Q reduction level in mitochondria
Karolina Dominiak*, Adam Mickiewicz University, Poland*

12:35 Lunch break, Exhibition & Poster session

Chairs: Pedro Buc Calderon, Carsten Culmsee

14:00 **Phagocyte NADPH oxidase, oxidative stress and lipids: anti or pro ageing**
Chantal Houée*, Université Paris Sud, France*

14:20 **Short oral presentations**

SIRT1 inhibition by peroxynitrite mediates nicotine-induced arterial stiffness in mice
Ping Song*, Georgia State University, USA*

Nitric oxide regulates protein homeostasis by S-Nitrosylations of the chaperone HSPA8 and the ubiquitin ligase UBE2D
***Irmgard Tegeder**, Goethe-University Hospital, Germany*

Oxidative stress-induced KLF4 activates inflammatory response through IL17RA and its downstream targets in retinal pigment epithelial cells
***David Li**, Sun Yat-Sen University, China*

Genetic variation in glutamate cysteine ligase as a susceptibility factor for Type 2 Diabetes
***Iuliia Azarova**, Kursk State Medical University, Russia*

Effect of high protein diet and feed restriction on oxidative stress parameters in early weaned pigs
***Elodie Bacou**, DSM, France*

15:10 Coffee Break, Exhibition & Poster Session

15:50 **Hypoxia and iron homeostasis: Recent Advances and perspective**
***Carole Peyssonnaux**, Inserm, Université Paris Descartes, France*

16:10 **Oxidative stress, signaling pathways and Metabolome: Advances and strategies**
***Carlos Malpica**, Proteigene, France*

Chairs: Carole Nicco, Miria Ricchetti

16:25 **Short oral presentations**

The oxidative stress sensor Heme-regulated inhibitory (HRI) kinase controls general protein homeostasis by triggering a cytosolic unfolded protein response
***Stephen E. Girardin**, University of Toronto, Canada*

β-Catenin activated hepatocellular carcinomas are protected against oxidative stress
***Mathilde Savall**, Cochin Institute, France*

Targeting integrin-linked kinase-mediated oxidative metabolism impairs therapy resistance of quiescent cancer stem cells in BCR-ABL+ Human Leukemia
***Xiaoyan Jiang**, University of British Columbia, Canada*

Activation of endothelial cell-specific mineralocorticoid receptor promotes diastolic dysfunction in western diet fed male mice via enhanced oxidative stress
***Guido Lastra Gonzalez,** University of Missouri, USA*

Modulation of diesel exhaust particles-induced oxidative distress and related injury in human umbilical vein endothelial cells by rooibos (aspalathus linearis)
***Jeanine L Marnewick,** Cape Peninsula University of Technology, South Africa*

Aryl Hydrocarbon Receptor (AHR)-mediated keratinocyte differentiation is dependent on metabolic reprogramming and the production of ROS
***Thomas Robert Sutter**, University of Memphis, USA*

QR2 detoxifies quinones in human neuroblastoma cells by cooperation with conjugation enzymes
***Monivan Chhour**, Laboratoire Pharma-Dev, France*

Possible mechanisms counteracting age-related intensification of oxidative stress in the mouse brain
***Volodymyr I. Lushchak**, Precerpathian National University, Ukraine*

Evaluating the effects of antioxidants Vitamin E and N-Acetyl-Cysteine against DNA damage caused by ionizing radiation
***Alireza Senejani**, University of New Haven, USA*

Roles of vitamin C and dimethyl sulfoxide combination on electrolytes, inflammation and oxidative stress biomarkers of wistar rats induced with ischemic stroke
***Lawal Bilbis,** Usmanu Danfodiyo University Sokoto, Nigeria*

Avermectin suppresses neutrophil extracellular traps formation via negatively regulating the PI3K-ERK pathway in carp
***Shufang Zheng,** Northeast Agricultural University, China*

Dietary inorganic nitrate attenuates hyperoxia-induced oxidative stress in obese type 2 diabetic male rats
***Asghar Ghasemi,** Shahid Beheshti University of Medical Sciences, Iran*

Modulation of DNA methylation profile of SRXN1 gene promoter in HT29 cells exposed to catechins of different redox activity
***Patrycja Jakubek,** Gdańsk University of Technology, Poland*

18:40 **End of the first day**

20:30 **Paris Redox 2019 Dinner**

Day 2 - June 21, 2019

Session 2: Oxidative stress, Mitochondria and Microbiota

Chairs: Sebastian Doll, Rheinallt M. Jones

08:00 **Introduction & Remarks: Mitochondria, Redox and Microbiota**
Marvin Edeas, *Institut Cochin, Inserm U1610, University Paris Descartes, France*

08:20 **Commensal microbiota induced redox signaling activates proliferative signals in the intestinal stem cell microenvironment**
Rheinallt M. Jones, *Emory University School of Medicine, USA*

08:40 **Redox and Microbiota: Effects of Antioxidants**
Jamila Faivre, *Inserm, Paul-Brousse University Hospital, France*

09:00 **Redox and Other Metabolic Disorders Associated with Autism: Strategic role of Butyrate**
Richard Frye, *Phoenix Children's Hospital, USA*

09:20 **Metabolic switches saving mitochondria from oxidative stress**
Carsten Culmsee, *Center for Mind, Brain and Behavior - CMBB, Germany*

09:40 **Dynamic Relationship between the reactive species interactome and bioenergetic metabolism in Brain**
Laurent Chatre, *CNRS, University of Caen-Normandie, France*

10:00 **Short oral presentations** (7 minutes for presentation + 3 minutes for questions)

Escherichia Coli mediated resistance of entamoeba histolytica to oxidative stress is triggered by oxaloacetate
Serge Ankri, *Technion, Israel*

Levels of serum free thiols are superior to fecal calprotectin in predicting endoscopic disease activity in inflammatory bowel disease
Arno Rolf Bourgonje, *University Medical Center Groningen, The Netherlands*

The cytoprotective potential of novel mitochondria-targeted iron chelators against UVA- and Hydrogen Peroxide-Mediated oxidative cell death in Friedreich's Ataxia fibroblasts
Charareh Pourzand, *University of Bath, United Kingdom*

10:30 Coffee break, Exhibition & poster session

Session 3: Oxidative stress implications in diseases

Chairs: Richard Frye, Harry van Goor

11:15 **Lipoic acid for treating multiple sclerosis**
Dennis Bourdette, *Oregon Health & Science University, USA*

11:35 **Recent advances on the neuroprotective role of the novel TLDC proteins against oxidative stress**
Mattéa Finelli, *University of Oxford, United Kingdom*

11:55 **Oxidative stress and inflammation in liver diseases: state of the issue and promising leads**
Patrick Gonzalez, *Inserm, Paul-Brousse University Hospital, France*

11:15 **Short oral presentations** (7 minutes for presentation + 3 minutes for questions)

Mitochondrial oxidative stress plays a critical role in the cardiotoxicity of sunitinib
Jamal Bouitbir, *University hospital Basel, Switzerland*

New formulations of melatonin to induce oxidative stress and cell death xenografts of head and neck cancer cells
Laura Martínez Ruiz, *University of Granada, Spain*

12:35 Lunch break, Exhibition & poster session

Session 4 - Redox 2019 Innovation

Chairs: Kenneth Olson, Daniel Vaiman

13:30 **Thiosulfate as a therapeutic option in Redox diseases**
Harry van Goor, *University Medical Center Groningen, The Netherlands*

13:50 **Myeloperoxidase, oxidative stress, and diseases: can we stop it?**
Semira Galijasevic, *Sarajevo School of Science and technology, Sarajevo Medical School, Bosnia*

14:10 **Biological Oxycombustion: Biological fuels and fire extinguishers**
***Eric Postaire**, Académie des Sciences, France*

14:30 **Multiresponsive hydrogel flexible sensors for metabolic oxidative stress analytics**
***Samuel Mugo**, MacEwan University, Canada*

14:50 **Short oral presentations** (7 minutes for presentation + 3 minutes for questions)

Oxidative stress markers in stroke patients: A Clinical study
***Susana Rey Alonso**, Bioquochem SL, Spain*

Advanced Water S-100: a new ionized water for innovative healthcare products
***Georges Bouille**, Adwatis SA, Switzerland*

Upstream of pathology; a new tool to diagnose the oxidative stress
***Thierry Berna,** SOS Stress Oxydatif Solutions, Switzerland*

15:20 Coffee break & poster session

Chairs**:** Laurent Chatre, Ludivine Doridot

15:50 **Short oral presentations**

The effect of Cold Atmospheric Pressure plasma (CAP) on cell migratory behaviors and molecular markers of wound healing machinery
***Debarati Shome**, Leibniz Institute for Plasma Science and Technology, Germany*

Preventing protein damage in reproductive cells through the inhibition of Arachidonate 15-lipoxygenase
***Elizabeth Grace Bromfield,** Utrecht University, The Netherlands*

Mitoprotection by next generation antioxidant carbon nanomaterials: Direct evidence for support of electron transfer
***Thomas Kent**, Texas A&M University, USA*

Antioxidant power series (APS) as a tool for rational design and assessment of health promoting properties of functional foods based on antioxidant phytochemicals
***Agnieszka Bartoszek,** Gdansk University of Technology, Poland*

Effect of reactive species generated by Cold Atmospheric Plasma on membrane lipids in presence of lipophilic and hydrophilic antioxidants
***Mehdi Ravandeh**, University of Greifswald, Germany*

Effects of weak static magnetic fields on ROS concentrations and the growth rates of cancer cells and planarian
***Frank Stephenson Barnes**, University of Colorado, USA*

Addressing glutathione redox status in clinical samples using a novel assay based on two-step alkylation and mass spectrometry
***Tamara Tomin**, Medical University of Graz, Austria*

Dietary antioxidants, total antioxidant capacity and the risk of diabetes, hypertension and cardiovascular outcomes: a longitudinal population-based study
***Zahra Bahadoran**, Shahid Beheshti University of Medical Sciences, Iran*

17:10 **Concluding remarks: Redox 2019**
***Harry van Goor**, University Medical Center Groningen, The Netherlands*

Discussion: Chaired by Oliver Nüsse with the participation of speakers and scientific committee
- Do we need to modify Redox Science Terminology: From ROS to Reactive Species Interactome?
- Redox 2020: Where is the Next Target?

Paris Redox Scientific & Innovation Awards 2019

17:30 **End of Paris Redox 2019 Congress**

Last updated on June 17, 2019