

INTERNATIONAL SOCIETY OF ANTIOXIDANTS

21st ISANH International Conference on

**Oxidative Stress Reduction,
Redox Homeostasis & Antioxidants**



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



INTERNATIONAL SOCIETY
OF
ANTIOXIDANTS



UNIVERSITÉ
PARIS
DESCARTES



institut
cochin
CENTRE DE RECHERCHE



Institut national
de la santé et de la recherche médicale



SORBONNE UNIVERSITÉS

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

Prof. Marvin Edeas

Institut Cochin, Inserm U1016, University Paris Descartes, France

Chairman of Paris Redox 2019 Scientific Committee

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 Peyssonnaud, 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**



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

Agenda

Day 1 - June 20, 2019

Chairpersons: Frédéric Batteux, Carsten Culmsee, Pedro Buc Calderon,
Marvin Edeas, Carole Nicco, Miria Ricchetti, Paul-Henri Romeo, Masayuki Yamamoto

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

08:50 **Opening of Paris Redox World Conference**

Frédéric Batteux, President of Paris Redox 2019, Institut Cochin, France

09:00 **Introduction to Redox 2019: Today & Tomorrow**

Pedro Buc Calderon, University of Louvain, Belgium

Session 1 – Redox 2019: Advances, Mechanistic and Perspectives

09:25 **Different roles of specific ROS in regulation of myogenic contractions in microarterioles**

Christopher Wilcox, Georgetown University, USA

09:45 **Chemogenetic approaches to dissect redox stress pathways in the cardiovascular system**

Thomas Michel, Harvard Medical School, USA

10:05 **Reactive Sulfide Species: An emerging paradigm in Redox Biology**

Kenneth R. Olson, Emeritus Professor of Physiology at Indiana University School of Medicine - South Bend, USA

10:25 Coffee Break & Poster Session

11:15 **Introduction on the Signaling Pathway & Redox**

Paul-Henri Romeo, University of Paris Diderot, France

11:20 **Keap1-Nrf2 Antioxidative stress response system**

Masayuki Yamamoto, Tohoku University Graduate School of Medicine, Japan

11:40 **Nrf2 in Duchenne muscular dystrophy**

Jozef Dulak, Jagiellonian University, Poland

12:00 **Targeting Nrf2-mediated redox signaling inhibits cancer cells growth in vitro and in vivo**

Venugopal Reddy Bovilla, JSS Academy of higher Education & Research, India

12:10 **Uric acid, a major energy regulator of the cell turning into a killer of pancreatic beta-cells**

Andrew Bahn, University of Otago, New Zealand

12:30 Lunch break, Exhibition & poster session

14:00 **Ferroptosis, a cell death modality caused by lipid peroxidation**

Sebastian Doll, Helmholtz Zentrum München, Germany

14:20 **Phagocyte NADPH oxidase, oxidative stress and lipids: anti or pro ageing**

Chantal Houée, Université Paris Sud, France

14:40 **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

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

15:30 Coffee Break, Exhibition & Poster Session

16:15 Hypoxia and iron homeostasis: Recent Advances and perspective
Carole Peyssonnaud, Inserm, Université Paris Descartes, France

16:35 Short oral presentations (7 minutes for presentation + 3 minutes for questions)

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

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

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, Precepathian 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 in carp by inducing demethylation of Pten to inhibit Pi3k/Akt/Raf/Mek/Erk pathway activation and attenuating respiratory burst
Shufang Zheng, Northeast Agricultural University, China

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

18:30 End of the first day

20:30 Paris Redox 2019 Dinner

Day 2 - June 21, 2019

Chairpersons: Laurent Chatre, Ludivine Doridot, Sebastian Doll, Richard Frye, Harry van Goor, Rheinallt M. Jones, Oliver Nüsse, Kenneth Olson, Daniel Vaiman

Session 2: Oxidative stress, Mitochondria and Microbiota

- 08:30 **Introduction & Remarks: Mitochondria, Redox and Microbiota**
Marvin Edeas, Institut Cochin, Inserm U1610, University Paris Descartes, France
- 08:50 **Commensal microbiota induced redox signaling activates proliferative signals in the intestinal stem cell microenvironment**
Rheinallt M. Jones, Emory University School of Medicine, USA
- 09:10 **Redox and Microbiota: Effects of Antioxidants**
Jamila Faivre, Inserm, Paul-Brousse University Hospital, France
- 09:30 **Redox and Other Metabolic Disorders Associated with Autism: Strategic role of Butyrate**
Richard Frye, Phoenix Children's Hospital, USA
- 09:50 **Metabolic switches saving mitochondria from oxidative stress**
Carsten Culmsee, Center for Mind, Brain and Behavior - CMBB, Germany
- 10:10 **Dynamic Relationship between the reactive species interactome and bioenergetic metabolism in Brain**
Laurent Chatre, CNRS, University of Caen-Normandie, France
- 10:30 Coffee break, Exhibition & poster session*
- 11:10 **Escherichia Coli mediated resistance of entamoeba histolytica to oxidative stress is triggered by oxaloacetate**
Serge Ankri, Technion, Israel
- 11:20 **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

Session 3: Oxidative stress implications in diseases

- 11:30 **Lipoic acid for treating multiple sclerosis**
Dennis Bourdette, Oregon Health & Science University, USA
- 11:50 **Recent advances on the neuroprotective role of the novel TLDC proteins against oxidative stress**
Mattéa Finelli, University of Oxford, United Kingdom
- 12:10 **Oxidative Stress & Liver: Strategies and Perspective**
Patrick Gonzalez, Inserm, Paul-Brousse University Hospital, France

12:30 Lunch break, Exhibition & poster session

Session 4 - Redox 2019 Innovation

- 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 Medical School, Bosnia
- 14:10 **Multiresponsive hydrogel flexible sensors for metabolic oxidative stress analytics**
Samuel Mugo, MacEwan University, Canada
- 14:30 **Biological Oxycubustion: Biological fuels and fire extinguishers**
Eric Postaire, Académie des Sciences, France

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

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

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

15:40 Coffee break & poster session

16:00 **Short oral presentations** (7 minutes for presentation + 3 minutes for questions)

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

Dietary inorganic nitrate attenuates hyperoxia-induced oxidative stress in obese type 2 diabetic male rats

Asgar Ghasemi, Shahid Beheshti University of Medical Sciences, Iran

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

Short oral presentation selected from Abstracts submission

17:10 **Concluding remarks: Redox 2019**

Harry van Goor, University Medical Center Groningen, The Netherlands

Discussion: Chair 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 May 17, 2019