International Society of Antioxidants

17th International Conference on

Oxidative Stress Reduction, Redox Homeostasis & Antioxidants

Paris Redox 2016

June 13-15, 2016
Institut Pasteur, Paris

Agenda

www.isanh.net

WELCOME NOTE

Dear Colleagues,

It is with great pleasure to announce the organization of the 17th International Conference on Oxidative Stress Reduction, Redox Homeostasis and Antioxidants to be held at Institut Pasteur in Paris, France from June 13 to 15, 2016.

During Paris Redox World Congress 2016, we will discuss the role of antioxidants as modulators of redox signaling pathways rather than players that counteract oxidative stress. Antioxidants affect cell signaling provided by redox processes. Mitochondria consist of localized signaling domains and produce reactive oxygen species, ROS (i.e. Superoxide and Hydrogen Peroxide), which are signaling molecules generated by the respiratory chain.

Furthermore, we will analyze the mechanisms by which cells respond to oxidative stress and prevent cell damage and cell death, with a particular focus on neurons and neurological conditions, strokes, Alzheimer's disease, kidney, muscle, and liver pathologies. Additionally, the mechanisms of redox regulation of cellular processes will be discussed.

Little is known on the specific targets of ROS and how oxidant and antioxidant signals are transmitted in the cell. 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. We will also highlight oxidative stress evaluation and discuss the recent advances on biomarkers, related to redox alteration.

Paris Redox 2016 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 strategic topics discussed during ISANH Redox 2016:

- Oxidative Stress, Redox Regulation & Modulation and Redox-Active Agents
- Oxidative Stress & Biomarkers: Imaging of Oxidative Stress
- Oxidative Stress & Stem Cells
- Beneficial effects of Oxidative Stress vs deleterious effects of antioxidants
- New Players in Redox balance
- Oxidative Stress, Ageing & Longevity: Where are we now?
- Oxidative Stress & Chronic Diseases: From Predictive to Preventive Medicine
- Oxidative Stress, Antioxidants & Innovations

With this exciting program we wish to meet you in Paris.

Marvin Edeas – Chairman of ISANH
Miria Ricchetti – Chairperson of the Local Organizing Committee

Paris Redox 2016

17th International Conference on

Oxidative Stress Reduction, Redox Homeostasis & Antioxidants

June 13-15, 2016

Institut Pasteur, Paris, France

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

08:55 **Opening of Paris Redox World Conference**
Marvin Edeas, Miria Ricchetti, Chairpersons, France

Day 1 - June 13, 2016

Session 1: Oxidative Stress, Ageing & Stem cells

Chaired by Marvin Edeas and Miria Richetti

09:00 **Keynote Lecture: Mitochondrial dysfunction and longevity in animals: Untangling the knot**
Siegfried Hekimi, McGill University, Canada

20 minutes + 5 minutes for discussion

09:30 **Stem cell regenerative decline with aging: role of oxidative stress**
Pura Muñoz-Cánoves, ICREA and Pompeu Fabra University, Spain

09:55 **Mitochondria and oxidative stress in age-related muscle loss (sarcopenia)**
Francesca Lo Verso, University of Padova, Italy

10:20 Coffee break & poster session

Session 2: Redox Regulation, Redox-Active Agents & Oxidative Stress Evaluation

Chaired by Pura Muñoz-Cánoves and Frédéric Batteux
20 minutes + 5 minutes for discussion

10:50 **A case of mistaken identity: are Reactive Oxygen Species actually reactive sulfide species?**
Kenneth R. Olson, Indiana University School of Medicine, USA

11:15 **Nox Inhibitors: from first-in-class Nox2ds-tat to a peptidic Nox1 & small molecule NOX2i's - Challenges & perspectives**
Patrick J. Pagano, University of Pittsburgh Pennsylvania, USA

11:40 **Deciphering the function of the STOX1 protein in the management of oxidative stress in trophoblast cells**
Daniel Vaiman, INSERM, France

12:05 **Secondary reactive oxygen species production in sera of patients with resectable non-squamous cell lung cancers**
Partial oxygen atmospheric pressure influences the occurrence of berry aneurysm disruption
Thierry Patrice, CHU de Nantes, France

12:30 Lunch break & poster session

Chaired by Patrick Pagano & Kenneth Olson

20 minutes + 5 minutes for discussion

14:00 **The complexity of ROS detection in harsh environments such as the phagosome**
Oliver Nüsse, Laboratoire de Chimie Physique, France

14:25 **Exhaled nitric oxide as predictor marker of interstitial lung disease and fibrosis**
Thong Hua-Huy, Cochin University Hospital, France

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

Improvement of oxidative stress reverses dysfunctions of human visceral adipose-derived stem cells
Shigeki Sugii, Duke-NUS Graduate Medical School, Singapore

Evaluation of peroxidation stress in cells using electrochemical peroxidation and real-time headspace selected ion flow tube mass spectrometry
Violetta Shestivska, J. Heyrovsky Institute of Physical Chemistry of the CAS, Czech Republic

Brain oxidative stress in suicidality and other-directed aggressivity: identification of the NADPH oxidase NOX2 as a novel biomarker
Stefania Schiavone, University of Foggia, Italy

Redox sensitive proteins: novel oxidative modifications and structural regulations
Kong-Joo Lee, Ewha Womans University, Korea

15:30 Coffee break & one-hour poster session

16:30 **Oxidative stress as biomarker of piglet health at weaning**
Arnaud Buchet, PEGASE, Agrocampus Ouest, INRA, France

N-acetyl ornithine deacetylase is a moonlighting protein and is involved in the adaptation of Entamoeba histolytica to nitrosative stress
Serge Ankri, Faculty of Medicine-Technion, Israel

Synergistic application of tea extract and lactic acid bacterial fermentation in enhancing bioavailability and anti-oxidative effectiveness of tea flavonoids in vitro and in vivo
Danyue Zhao, The University of Hong Kong, China

What do we really know about HNO reactivity? Implications for its fluorescence imaging in vivo
Adam Sikora, Lodz University of Technology, Poland

Quantitation of nitric oxide in cell culture by luciferin-luciferase chemiluminescence
Yakov Woldman, Valdosta State University, USA

17:20 **End of the first day**

17:30 **Visit of Institut Pasteur Museum**
During Paris Redox 2016 participants will have the opportunity to visit the Pasteur Museum. on Monday June 13, from 17:45 to 19:00.

You can join the group directly near the museum. Visit the Pasteur Museum, a place of remembrance that first opened to the public at Institut Pasteur in 1936. The Museum harbors the memory of the life and work of Louis Pasteur in the spacious apartment he occupied during the final seven years of his life.

20:00 **Paris Redox 2016 Dinner at Hotel Sofitel Paris Le Faubourg**
15, rue Boissy d'Anglas, 75008 Paris
If you would like to participate, please register online or on site, at the registration desk.

Paris Redox 2016

Day 2 - June 14, 2016

08:00 **Welcoming & Registration of Attendees**

Session 3: Oxidative Stress, Redox Regulation and Cancer

Chaired by Martin Bergö and Pedro Buc Calderon
20 minutes + 5 minutes for discussion

08:30 **On the role of ROS and antioxidants in tumor initiation and progression**
Martin Bergö, Karolinska Institute, Sweden

08:55 **Antidiabetic therapy, Antioxidants and tumor initiation**
Hui Wang, Third Military Medical University, China

09:20 **NQO1 overexpression modulates breast cancer cell sensitivity to quinone-based chemotherapeutic agents**
Pedro Buc Calderon, Université catholique de Louvain, Belgium

09:45 **The chicken or the egg question of oxidative and endoplasmic reticulum stresses in cancer therapy**
Mikhail Nikiforov, Roswell Park Cancer Institute, USA

10:10 **Dimethyl fumarate controls the DJ-1/NRF2 axis in cancer cells: therapeutic applications**
Nathaniel Saidu, INSERM, France

10:35 Coffee break & poster session

11:15 **ROS deficiency as disease risk**
Ulla Knaus, University College Dublin, Ireland

11:40 **Response to antioxidant therapy: impact of the nitroso-redox balance in restoring proteases and mitochondrial function in a progeroid disease**
Laurent Chatre, Institut Pasteur, Paris

11:55 **Short oral presentations (7minutes + 3 minutes for questions)**

Quantitative analysis of the regulatory circuits underlying antioxidant response and proliferation of ovarian cancer cells to understand and inform treatment design
Yahaya Yusuf Deeni, Abertay University, United Kingdom

Advanced glycation end products induce liver injury in non-alcoholic steatohepatitis (NASH) via hepatocyte NOX4
Natalie J. Torok, UC Davis Medical Center, USA

Restauration of copper homeostasis in Alzheimer disease
Anne Robert, CNRS, France

Preventing oxidative reactions during red blood cell storage for transfusion
Aline Roch, University of Geneva, Switzerland

12:35 Lunch break & poster session

Session 4: Skin Oxidative Stress & Redox Homeostasis

Chaired by Ulla Knaus and Martina Meinke
20 minutes + 5 minutes for discussion

14:00 **Cutaneous oxidative stress induced by pollution (particulate matter) and its aggravation by environmental ultraviolets**
Laurent Marrot, L'Oréal R&D, France

14:25 **Skin redox balance maintenance: The need for an Nrf2-activator delivery system**
Maya Ben-Yehuda Greenwald, The Hebrew University of Jerusalem, Israel

14:50 **The pantethine/vanin pathway controls ROS-induced skin fibrosis**
Niloufar Kavian, INSERM, France

15:15 **Skin anti-ageing and systemic redox effects of supplementation with marine collagen peptides and plant-derived antioxidants**
Liudmila G. Korkina, Centre of Innovative Biotechnological Investigations, Russia

15:40 Coffee break & one-hour poster session

16:30 **Cutaneous free radical induction by sunlight in different spectral regions and counteraction by systemically or topical applied antioxidants**
Martina Meinke, Charité - Universitätsmedizin Berlin, Germany

16:55 **Short oral presentations** (7minutes + 3 minutes for questions)

Oxidative stress & plaque psoriasis
Maria Costantino, Association FIRSTermae, Italy

Overexpression of heterogeneous nuclear ribonucleoprotein F (HnRNP F) prevents oxidative stress and kidney injury in diabetic mice
John Chan, Centre de Recherche-CHUM, Canada

Blue-light dependent ROS formation by cryptochrome may represent a novel signaling mechanism
Margaret Ahmad, University of Paris VI, France

A new tomato hybrid to fight UVA-induced (ultraviolet) oxidative stress
Daria Maria Monti, University of Naples Federico II, Italy

A sub-population of primary acute myeloid leukemia blasts shows resistance to oxidative stress and reduced p38MAPK activation
Richard Darley, Cardiff University, United Kingdom

Pro-apoptotic phytochemicals inhibit cell proliferation and promote oxidation of the typical 2-Cys peroxiredoxin proteins in Jurkat T-lymphoma cells
Ann Kathryn Schuller, Flinders University, Australia

A new family of antioxidant proteins: antioxidant properties of the chloride intracellular ion channel protein, CLIC1
Stella Valenzuela, University of Technology Sydney, Australia

ROS increases glycolysis in acute myeloid leukaemia via overexpression of PFKFB3
Alex Tonks, Cardiff University, United Kingdom

Human alpha-thrombin binds to and potently inhibits leukocyte myeloperoxidase: a novel biochemical link between inflammation and coagulation
Vincenzo De Filippis, University of Padova, Italy

Effect of Ethylmethylhydroxypyridine succinate (EMS) on brain degeneration in multiple sclerosis
Lidia Prakhova, Institute of Human Brain of the Russian Academy of Sciences n.a. N.P. Bechterev, Saint-Petersburg, Russia

NADPH Oxidase-induced oxidative stress enhances VEGF synthesis under hyperglycemic condition in ARPE-19 cells
Rashidul Haque, Emory University, United States

Autologous activation of anti-stress gene functions in humans
Victor Semenkov, Pirogov Rassian National Research Medical University, Russia

18:55 **End of the second day**

Paris Redox 2016

Day 3 - June 15, 2016

Session 5: Oxidative Stress & Chronic Diseases: From Predictive to Preventive & Therapeutic Medicine

Chaired by Harald Schmidt and Ross Vlahos
20 minutes + 5 minutes for discussion

08:30 **Peroxisome proliferation: an anti-oxidant defense against noise-induced hearing loss**
Christine Petit, Institut Pasteur, France

08:55 **Oxidative stress, Sarcopenia, Antioxidant strategies and Exercise: Molecular aspects**
Thomas Brioche, Université de Montpellier, France

09:20 **Pre-clinical evidences that antioxidant supplementation corrects sperm DNA oxidative damage and improves reproductive success**
Joël Drevet, Clermont Université, France

09:45 **Reactive oxygen-related diseases: therapeutic targets and emerging clinical indications**
Harald Schmidt, Maastricht University, The Netherlands

10:10 Coffee break & one-hour poster session

11:10 **Acute, chronic lung diseases and oxidative stress: targeting respiratory infections, COPD and viral-induced exacerbations of COPD**
Ross Vlahos, RMIT University, Australia

11:35 **Physiological glycation by methylglyoxal and prevention by glyoxalase 1 - involvement in disease mechanisms and development of glyoxalase 1 inducer therapeutics**
Paul Thornalley, University of Warwick, United Kingdom

Session 6: Oxidative Stress, Antioxidants & Innovations

20 minutes + 5 minutes for discussion

12:00 **Antioxidant systems in brain astrocytes: sources of cysteine for glutathione**
Gethin McBean, University College Dublin, Ireland

12:25 **Controlling ROS in platinium-induced peripheral neuropathy: therapeutic applications**
Olivier Cerles, INSERM, Paris

12:50 Lunch break & poster session

14:00 **Short oral presentations** (7minutes + 3 minutes for questions)

The effects of Metformin on mitochondrial function in granulose-cumulus cells
Haim Yaakov Bentov, University of Toronto, Canada

Lycopen & lutein: two essential antioxidant micro-nutriments – Clinical & nutritional challenges
Yvan Petyaev, Lycotec Ltd., United Kingdom

Targeted delivery of reactive species for anticancer therapy
Ludmil Benov, Kuwait University, Kowait

Mitochondrial deacetylation is an activating signal mediated by sirtuin 3 for metabolism-secretion coupling in pancreatic beta cells
Umberto de Marchi, Nestlé Institute of Health Sciences, Switzerland

Oxidative stress and cerebral cavernous malformation disease: from pathogenic mechanisms to preventive and therapeutic approaches
Saverio Francesco Retta, University of Torino, Italy

Protandim treatment causes reversible nuclear translocation of Nrf-2 and activation of the antioxidant response element
Nathalie Chevreau, LifeVantage Corp., United States

Protective effects of quercetin and SRT1720 against D-Galactosamine/Lipopolysaccharide-induced hepatotoxicity: role of sirtuin 1 modulation
Mighty Kemelo, Charles University in Prague and General University Hospital in Prague, Czech Republic

TNF-alpha promotes mouse astrocytes microvesicules release through raised glutaminase
Jialin Zheng, Tongji University School of Medicine, China

Do glycation end products in infant formula contribute to long term oxidative stress?
Latifa Abdennebi-Najar, Institut Polytechnique LaSalle Beauvais, France

15:30 **Concluding remarks by Paris Redox 2016 chairpersons**

15:45 **Paris Redox Awards 2016**

16:00 **End of Paris Redox 2016 Conference**