3-Days Program
June 22: Workshop on Oxidative Stress Evaluation
June 23-24: Plenary Sessions
GENERAL INFORMATION

DATE
June 22-24, 2015

PARTICIPANTS
250 - 300 participants expected

CITY/COUNTRY
Paris, France

REGISTRATION & PRACTICAL INFORMATION
ISANH
Antioxidants 2015 Secretary
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CONFERENCE VENUE
Pasteur Institute
25 rue du Dr Roux
75015 Paris, France
WELCOME NOTE

It is a great pleasure to announce the organization of 15th International Conference on Oxidative Stress Reduction, Redox Homeostasis and Antioxidants, which will be held at Institut Pasteur in Paris, from June 22 to 24, 2015. A workshop dedicated to Oxidative Stress Evaluation will be held on June 22.

ISANH Antioxidants 2015 will highlight the mechanisms of redox regulation of cellular processes. 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 aim that Paris Antioxidants 2015 will contribute to a better understanding of redox control in physiological and pathological states and in ageing, leading to new therapeutic and disease-preventive agents.

During Paris Antioxidants World Congress 2015, we will be interested to understand the ways in which cells respond to oxidative stress and how to prevent damage and cell death, with a particular focus on neurons and neurological conditions, stroke, Alzheimer’s disease, Kidney and Liver pathologies… We will discuss the role of antioxidants as modulators of redox signaling pathways rather than players that counter "balance" oxidant formation. Indeed, antioxidants affect cells signaling provided by redox processes. Mitochondria constitute a localized signaling domain and produce ROS, which are signaling molecules generated by the respiratory chain.

Among strategic topics discussed during ISANH Antioxidants 2015:

- Oxidative Stress, Redox Regulation & Modulation and Redox-Active Agents
- Oxidative Stress & Biomarkers: Imaging of Oxidative Stress in 2015
- 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

Oxidative Stress Evaluation Workshop

The aim of this workshop is to present the latest innovations on oxidative stress evaluation by highlighting:

- Towards an oxidative stress’ signature from Exhaled Breath Condensate
- Biosensor for Detection of Oxidative Stress
- Oxidative Stress Biomarkers
- Redox State Visualization & Imaging
- Oxidative Stress, Antioxidants & Human Studies
- Comet Assays
Oxidative Stress Imaging in vitro / in vivo

During Paris Antioxidants 2015, we will discuss and present recent advances on visualization and imaging of oxidative stress using new methods. The scientific committee will allocate time for several presentations on the in vivo evaluation of oxidative stress and its impact on proteins, DNA, and mitochondria.

To conclude this congress, we will organize a round table discussion to answer two strategic questions:

- **Oxidative Stress and Antioxidants: The “positive” and “negative” sides of the coin for antioxidants and ROS**
- **The subtle balance between redox homeostasis, ROS, and mitochondria homeostasis**
- **What are the Best & Adequate Methods to Evaluate Oxidative Stress & Antioxidants in vitro vs in vivo & in Humans?**

With this exciting program, we wish to meet you in lovely Paris next June.

**On behalf of the Scientific Committee**

*Marvin Edeas - Chairman of the Scientific Committee*

*Miria Ricchetti – Chairperson of the Local Organizing Committee*
AGENDA OF ISANH ANTIOXIDANTS 2015

15th International Conference on
Oxidative Stress Reduction, Redox Homeostasis & Antioxidants
June 22-24, 2015
Institut Pasteur, France

Day 1 - June 22, 2015
Oxidative Stress Evaluation & Biomarkers:
Recent Advances & Recommendations

Chair by Oliver Nüsse, Thierry Patrice
José Ángel Rufián-Henares Paul Thornalley (from 08:55 to 12:55)

08:55 Opening of Oxidative Stress & Antioxidants World Conference
Marvin Edeas, Miria Ricchetti, Chairpersons, France

09:00 Oxidative Stress, Antioxidants & Biomarkers: Where is the Golden Standard?
Marvin Edeas, Chairman of ISANH, France

09:30 Evaluation of Antioxidants Activity & Oxidative Stress: Towards a ISANH Standard
Why we failed with other methods: A Critical Point of View
José Ángel Rufián-Henares, Departamento de Nutrición y Bromatología Facultad de Farmacia, Spain

10:00 Oxidative stress Evaluation in Human Clinic: A New Method
Thierry Patrice, CHU Nantes, France

10:30 Coffee Break

11:00 F2-isoprostane, 15(S)-8-isoprostaglandin F2α Measurement in Biological Samples by GC-MS or GC-MS/MS: Recent Advances & Perspectives
Dimitros Tsikas, Eicosanoids and Oxidative Stress Centre of Pharmacology and Toxicology, Germany:

11:30 Salivary Oxidative Status in Patients with Oral Lichen Planus
Palina Vyhouskaya, Jagiellonian University, Poland

Redox State Visualization & Imaging

11:40 Visualization of Local Redox State in Cells: Its Application to Biology and Drug Screening
Yasuyoshi Sakai, Kyoto University, Japan

12:10 Screening Antioxidant Activators of Nrf2 - Have we been Misreading the Signals?
Frequency modulated translocational oscillations of Nrf2 regulate the antioxidant response element cytoprotective transcriptional response
Paul Thornalley, University of Warwick, United Kingdom
12:40  Neuroimaging Biomarkers of Oxidative Stress in Brain Aging and Injury
   Janna L. Harris, University of Kansas Medical Center, USA

12:55 Lunch Break

Exhaled Breath Condensate

Chairied by Laurent Chatre, Meng-Er Huang, Yasuyoshi Sakai
(from 14:00 to 17:00)

14:00  Assessment of Oxidative Stress Biomarkers in Exhaled Breath Condensate: Practical Point of View
   Pietro Celi, University of Sydney, Australia

Oxidative Stress Biomarkers & Biosensors

14:30  Redox-Sensitive GFP and YFP Sensors for Monitoring Nuclear Redox Dynamics
   Meng-Er Huang, CNRS - Institut Curie, France

15:00  New Biosensors for Spatio-Temporal Detection of Phagosomal ROS Production
   Laurent Nault, Université Paris Sud, France

15:30  Deciphering Additional Properties of a Compound that Affects Mitochondrial Function and Oxidative Stress
   Laurent Chatre, Institut Pasteur, France

15:45 Coffee Break

16:15  DMPD (N,N-Dimethyl-p-Phenylene Diamine) on Nafion Membrane as an Oxidative Stress Biomarker and Colorimetric Antioxidant Sensor
   Mustafa Resat Apak, Istanbul University, Turkey

Comet Assays

16:30  Comet Assays: Recent Advances & Recommendations
   Towards a standardization of DNA damage biomarker assay for human biomonitoring
   Monica Neri, IRCCS San Raffaele Pisans, Italy

17:00 Round Table Discussion
   What are the Best & Adequate Methods to Evaluate Oxidative Stress & Antioxidants in vitro vs in vivo & in Humans?
   With the participation of Marvin Edeas, Miria Ricchetti, José Ángel Rufián-Henares, Thierry Patrice, Dimitros Tsikas
   Yasuyoshi Sakai, Paul Thornalley, Pietro Celi, Meng-Er Huang, Laurent Chatre, Monica Neri

   Each speaker will provide critics and comments about the best methods of oxidative stress & antioxidants evaluations.

18:00 Discussion & Questions:
   - New Generation of Oxidative Stress Biomarkers from Exhaled Breath Condensate
   - Chronic Diseases & Oxidative Stress Signature
   - ISANH Platform to Evaluate Oxidative Stress & Mitochondrial Dysfunction: Towards a ISANH Standard

18:00 End of the First Day
16:30 – 18:00 Registrations for Days 2 & 3
Day 2 - June 23, 2015

07:15 Registration

08:25 Opening of Oxidative Stress & Antioxidants World Conference
  *Marvin Edeas, Miria Ricchetti*, Chairpersons, France

08:30 Introduction Note - Oxidative Stress & Antioxidants: What's next?
  *Marvin Edeas*, Chairman of ISANH, France

Opening Lecture (25 + 5 minutes)

08:45 Is Oxidative Protein Damage the Root Cause of Aging and Age-Related Diseases?
  *Miroslav Radman*, INSERM, France

**Session 1 - Oxidative Stress, Redox Regulation-Modulation and Mechanistics**

Positive Effects of Oxidative Stress vs Negative Effects of Antioxidants

*Chaired by Pedro Buc Calderon & Miria Ricchetti*

Major Talks (20 + 5 minutes)

09:15 Antioxidants vs Pathologies: Pros and Cons
  *Per Lindahl*, University of Gothenburg, Sweden

09:40 Regulation of Catalase Expression in Cancer Cells
  - A pro-oxidant strategy to kill cancer cells
  - ROS levels in cancer cells: a double-edged sword
  *Pedro Buc Calderon*, Louvain University, Belgium

10:05 A Novel Mechanism Controlling Transition between Good and Bad ROS in Cancer Cells
  *Mikhail Nikiforov*, Roswell Park Cancer Institute, USA

10:20 The Effect of Redox Modulation on Immune, Inflammatory & Metabolic Pathways in Diseases
  Impact of metalloporphyrins on Reduction inflammation & auto-immunity
  *Jon Piganelli*, Children’s Hospital of Pittsburgh of UPMC, USA

10:45 Coffee Break & Posters Session

11:15 Oxidative & Metastatic Process: Recent Advances and Strategies
  *Thierry Tchéno*, LBPA, France

11:40 SUMO: A (Oxidative) Stressed Sensor Protein in Neurodegenerative Diseases
  *Marco Feligioni*, EBRI, Italy

12:05 Peroxisomes and Redox Homeostasis: Recent Advances in Adrenoleukodystrophy and Therapeutic Strategies
  *Stéphane Savary*, Université de Bourgogne, France

12:30 Lunch Break & Posters Session
14:00  Progress and Emerging Challenges: Hmox1 in the Spotlight  
  
  *Gabor Czibik, Université Paris Est, France*

14:25  Strategies to Modulate Oxidative Stress: Nutritional Approaches vs Extracellular Vesicles  
  
  *Ramaroson Andriantsitohaina, INSERM, France*

14:50  Short Oral Presentations for Sessions 1 & 2 (5 + 2 minutes)

  - Ambient Ultrafine Particles Increase Reactive Oxygen Species Formation in Quiescent Human Monocytic Cells  
    *Arezoo Campbell, University of California, USA*

  - Inflammation-Responsive Antioxidant Polymeric Prodrug Nanoparticles  
    *Dongwon Lee Chonbuk, National University, Korea*

  - Oxidative Stress and Repairing Mechanisms Associated with Air Pollution  
    *Marie-Abèle Bind, Harvard University, USA*

  - Influenza Virus Replication in Lung Epithelial Cells Depends on Redox-Sensitive Pathways Activated by Nox4-Derived ROS  
    *Donatella Amatore, “Sapienza” University of Rome, Italy*

  - Modulation of Reactive Oxygen Species Production by Integrin-Linked Kinase  
    *Lina Dagnino, The University of Western Ontario, Canada*

  - Activation of the Kynurenine Pathway Leads to Reactive Oxygen Species-Mediated Apoptosis of Human Retinal Endothelial Cells: Implications for Diabetic Retinopathy  
    *Ram Nagaraj, University of Colorado, USA*

  - NADPH Oxidase DUOX1 Promotes Long-Term Persistence of Oxidative Stress after an Exposure to Irradiation  
    *Rabii Ameziane El Hassani, Institut Gustave Roussy, France*

  - Thiol-Reactive Peptidomimetic sk053 Targets Dimeric Peroxiredoxins in Human Lymphoma Cell Lines  
    *Malgorzata Firczuk, Medical University of Warsaw, Poland*

16:00  Coffee Break & Posters Session

16:30  Oxidative Stress Evaluation in Human Clinic: The Perfect Clinical Study  
  
  *Thierry Patrice, CHU Nantes, France*

16:55  Oxidative Stress Serum Markers and Mortality – Pooled Results from four Population-Based Cohort Studies  
  
  *Ben Schöttker, German Cancer Research Center, Germany*

17:20  Age-Related Changes on DNA Damage and Repair Activity in Humans: Effects of Physical Exercise Training and Oxidative Stress  
  
  *Jorge Soares, CIDESD, UTAD, Portugal*

17:55  Visualization and Imaging of Local Redox State in Cells: Strategic Applications in Drug Screening  
  
  *Yasuyoshi Sakai, Kyoto University, Japan*

18:05  Nrf2 Modulation: Myth or Reality?  
  
  *Tony Kong, Rutgers, The State University of New Jersey, USA*
18:15 Short Oral Presentations for Sessions 1 & 2 (5 + 2 minutes)

Nrf2-mediated Antioxidant Response: Implications for the Prevention of Fetal Alcohol Spectrum Disorders
**Shao-yu Chen**, University of Louisville Health Sciences Center, USA

Redox Regulation of the Type II Diabetes-Associated Protein MitoNEET
**Huangen Ding**, Louisiana State University, USA

Regulation of Hematopoiesis by Myeloid Cell-Derived Reactive Oxygen Species
**Hongbo Luo**, Harvard Medical School and Children's Hospital Boston, USA

Influence of Lipids on ROS Production by NADPH Oxidase
**Rawand Masoud**, Université Paris Sud, France

Polyphenol Induces Blood Level Low Density Lipoprotein (LDL) Influx in Macrophages
**Jacob Vaya**, Tel Hai Academic College and Migal Research Institute, Israel

Gamma Glutamyl Transferase (GGT) Activity: An Early Predictor of Metabolic and Oxidative Risk Markers in Apparently Healthy Young Adults
**Jumana Saleh**, Sultan Qaboos University, Oman

Biochemical & Molecular Studies of the Oxidative Stress and Antioxidant Capacity in Saudi Women with Recurrent Miscarriage
**Mourad Aboul-Soud**, King Saud University, King Saudi Arabia

Regulation of Age-Related Hypertension by Modulation of in Vivo Redox
**Kumuda C. Das**, Texas Tech University Health Sciences, USA

Study of the Prolonged Consumption of two Species of Açai, in two Different States of Processing (Pasteurized or Not) on Postprandial Glycemia in Marathon Runners
**Leandro Camargo Neves**, Federal University of Roraima, Brazil

19:15 End of Second Day

20:00 Dinner in a French Typical Restaurant

If you would like to participate, please register before May 31 directly on website.

Day 3 - June 24, 2015

08:25 Opening of the Third Day

Session 3 - Oxidative Stress, Ageing & Longevity

*Chaired by Frédéric Batteux & Marvin Edeas*

08:30 Oxidative Stress and Aging: Role of Mitochondria & Maillard Reaction
**Ladislas Robert**, Hôtel-Dieu, France

08:55 A Novel Paradigm for Oxidative and Nitrosative Stress in a Precocious Aging Syndrome
**Miria Ricchetti**, Institut Pasteur, France

09:20 Nrf2 Activation by Resveratrol Protects Skin against Acute Oxidative Stress, through Glutathione Mobilization
**Laurent Marrot**, L'Oréal, France

09:45 Short Oral Presentations (5 + 2 minutes)

Mitochondrial Activations in Pancreatic Beta-Cells: Ca2+- and Redox- Dependent Signal Transduction
**Umberto De Marchi**, Nestlé Institute of Health Science, Switzerland
Epigenetic Regulation of Redox Enzyme System  
Jayasri Nanduri, The University of Chicago, USA

High Dose Resveratrol in Human Subjects over 84 Days: Implications on Plasma Levels of Resveratrol  
Jeremy J. Johnson, University of Illinois, USA

Antioxidant Activity of Cocoa Stem Cells Extract for Extrinsic and Intrinsec Cytoprotection  
Corinne Reymermier, BASF Beauty Care Solutions France, France

Interleukin33 is Critical for Controlling Tissue Oxidative Stress and Aging through Regulation of Disposal of Unwanted Cells  
Yahuan Lou, University of Texas Health Science Center, USA

10:20 Coffee Break & Posters Session

Session 4 - Oxidative Stress & Chronic Diseases: Innovations in Predictive & Preventive Medicine  
Chaired by Bernard Fromenty & Thierry Léveillard

10:50 Depression, Oxidative Stress & Biomarkers: Strategies & Perspectives  
Catherine Black, VU University Medical Center, The Netherlands

11:15 Membrane Proteins as Redox Hubs in the Brain  
Hajieva Parvana, Johannes Gutenberg University, Germany

11:40 Role of Reactive Oxygen Species in the Pathophysiology and Treatment of Systemic Sclerosis  
Frédéric Batteux, Université Paris Descartes, France

12:05 Role of Oxidative Stress in Liver Injury Induced by Drugs and other Xenobiotics  
Bernard Fromenty, INSERM, Université de Rennes, France

12:30 Lunch Break & Posters Session

Chaired by Laurent Marrot & Oliver Nüsse

14:00 Oxidative Stress-Related Mechanisms Affecting Response to Aspirin in Diabetes Mellitus  
Francesca Santilli, D'Annunzio University Center of Excellence of Aging, Italy

14:25 The Truncated Thioredoxin Rod-derived Cone Viability Factor induces Cone Survival by Stimulating Aerobic Glycolysis  
Thierry Léveillard, INSERM, France

14:50 The Nrf2/HO-1 Axis as a Therapeutic Target against Oxidative Stress and Inflammation  
Roberta Foresti, INSERM, Université Paris-Est, France

15:15 Antioxidant Supplementation in Farm Animals: Opportunities and Challenges  
Pietro Celi, University of Sydney, Australia

15:30 Lunch Break & Posters Session

Chaired by Meng-Er Huang, Mikhail Nikiforov & Miria Ricchetti

16:00 Short Oral Presentations (5 + 2 minutes)

Antioxidative Functions of Natural Pigments on Gastric Ulcer and Cancer  
Hyo-Ihl Chang, Korea University Anam-Dong, Korea

Clinical Applicability of Thioredoxin-Albumin Fusion Protein for Oxidative Stress Related Diseases  
Masaki Otagiri, Sojo University, Australia

N-Acetylcysteine (NAC) in Huntington’s Disease (HD) and Affective-Like Disorders  
Thibault Renoir, University of Melbourne, Australia
Biodisponibility Study of an Innovative Orobuccal Formulation of Glutathione
Daniela Buonocore, University of Pavia, Italy

Novel Use of a Superoxide Radical Dismutating Agents as a Therapeutic Approach to Hamper the Progression of Parkinson’s Disease
Marco Bisaglia, University of Padova, Italy

Glutathionylated Proteins Released in Inflammation and Infection
Paola Checconi, Sapienza University of Rome, Italy

Oxidative Stress and the Aging Eye
Julie Lim, University of Auckland, New Zealand

Maintenance of Glutathione Homeostasis in the Eye – Is the Lens a Reservoir of Glutathione?
Ankita Umpathy, University of Auckland, New Zealand

Genetic Variations in the Oxidative Stress Related Genes are Associated with Pulmonary Complications in Community-Acquired Pneumonia
Lyubov E. Salnikova, Russian Academy of Sciences, Russia

Antioxidant Therapy in Inducible Mild Colitis in Rats: Does N-Acetyl-Cysteine and Lipoic Acid Work?
Marilia O.F. Goulart, Universidade Federal de Alagoas, Brazil

Are Vitamin Supplements Good for Healthy Aging?
Eugene Jansen, National Institute for Public Health and the Environment, The Netherlands

The Effect the “Poisonous” Beta-Carotene and the “Wholesome” Vitamin E on DNA Adduct Formation
Guido R. Haenen, Maastricht University, The Netherlands

Reaction Dynamics of Carotenoids as Antioxidant
Ruimin Han, Renmin University of China, China

Oxidative DNA Damage Induced by Blood Pressure-Regulating Hormones and Possible Strategies for Prevention
Nicole Schupp, University of Düsseldorf, Germany

Xanthohumol Improved Neuro-Inflammation Process and Dysfunction of Synaptic Plasticity in the Brain of Female Senescence Accelerated Mouse
Roman Kiriev, University Complutense of Madrid, Spain

Mushrooms as an Exciting and Innovative Source of Natural Antioxidants: The Case of the Oyster Basidiomycete Pleurotus Ostreatus
Joaquin Humberto Morris, University of Oriente, Cuba

Liposomal Glutathione Supplementation Restores Appropriate Cytokine Response to Mycobacterium tuberculosis Infection in HIV Infected Individuals
Vishwanath Venketaraman, Western University of Health Sciences, USA

17:55 Round Table Discussion chaired by Marvin Edeas & Miria Ricchetti
  • Oxidative Stress and Antioxidants: The “positive” and “negative” sides of the coin
  • The subtle balance between redox homeostasis, ROS, mitochondria & microbiota
  • Towards a golden standard of Oxidative Stress & antioxidants in medicine

18:15 Closing Keynote Lectures
  Miroslav Radman, INSERM, France
  Frédéric Batteux, Université Paris Descartes, France

18:30 End of ISANH Antioxidants Conference
ISANH ANTIOXIDANTS 2015 INSTITUTIONAL PARTNERS