

22nd International Conference on

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

PARIS REDOX 2020

October 8-9, 2020

VIRTUAL CONGRESS



INTERNATIONAL SOCIETY
— OF —
ANTIOXIDANTS
IN NUTRITION & HEALTH

WWW.ISANH.NET

Dear Colleagues,

It is our great pleasure to present you the **22nd International Conference on Oxidative Stress Reduction, Redox Homeostasis and Antioxidants - Paris Redox 2020** – which will be organized as **Virtual Congress**, on October 8-9, 2020.

I am honored to serve as your new President for the upcoming Paris Redox World Congress 2020. Hereby I will also express my gratitude to professor Frédéric Batteux for his excellent leadership in the past years. In the upcoming meeting, we will discuss Redox signaling in the light of the Redox Signaling Interactome (RSI) implicating a role for reactive oxygen species, reactive nitrogen species and reactive sulfur species in the modulation of redox signaling pathways. The inclusion of multiple reactive species as driving forces of redox signaling will significantly broaden our scope. Abstracts on mechanisms by which cells respond to RSI stress and thereby prevent structural and functional damage and death are welcomed to a great extent. We also aim to highlight downstream biochemical alterations induced by RSI stress and evaluate recent advances on disease biomarkers, related to RSI alterations. To further elucidate the various mechanisms of redox control in oxidative stress-related pathologies and aging, we welcome data on the identification and dissection of the function of the key players in reactive species-related redox processes.

Paris Redox 2020 will make an important contribution to a better understanding of RSI-induced redox control in physiological and pathological conditions that will lead to novel therapeutic and disease-preventive agents. Clinical studies in the field are therefore of eminent importance.

In response to the critical situation and evolution of the COVID-19, the organizing Committee decided to organize Paris Redox 2020 as a **Virtual Congress**.

If you cannot attend in-person or virtual due to the restriction and time zone difference, you can access on-demand videos to this entire event, including synced audio/video and slides, access to the exhibit hall, and a poster session.

Among the strategic topics which will be discussed:

- *COVID-19 & Oxidative Stress*
- *Redox 2020: Recent Advances & Perspectives*
- *Oxidative stress, Microbiota Diversity, Mitochondria, Redox and Inflammation*
- *Reactive Species Interactome Evaluation*
- *Redox & Fasting 2020*
- *Paris Redox Scientific & Innovation Awards 2020*

For this year, we are organizing a workshop dedicated to **How to Evaluate Oxidative Stress & Antioxidants Activities?** which will be held on October 7, 2020. For more info, please [follow this link](#).

We invite you to submit papers on reactive oxygen species, reactive nitrogen species and reactive sulfur species related to health and disease ranging from fundamental and technical aspects to experimental and clinical diseases.

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

Prof. Harry van Goor

President of ISANH

Department of Pathology and Medical Biology, University Medical Center

Groningen, The Netherlands

22nd ISANH International Conference on
Oxidative Stress Reduction, Redox Homeostasis & Antioxidants
PARIS REDOX 2020

October 8 - 9, 2020 - Virtual Congress

Discussion & Scientific - Innovation Awards

- Covid-19 & Oxidative Stress
- Redox 2020: Recent Advances & Perspective
- Microbiota Diversity, Redox and Inflammation
- Reactive Species Interactome Evaluation
- Redox Medicine: Innovations & Clinical Studies
- Paris Redox Scientific & Innovation Awards 2020

Important Dates

Short Oral presentation: Sep. 4
 Poster presentation: Sep. 14

Special Session

Covid-19 & Oxidative Stress

Paris Redox 2020 Speakers



Angiotensin-converting enzyme-2 (ACE2), SARS-CoV-2 and pathophysiology (COVID-19)

Harry van Goor
 President of ISANH & University Medical Center,
 The Netherlands



Are Reactive Sulfur Species The New Reactive Oxygen species?

Kenneth R. Olson,
 Indiana University School of Medicine in South Bend, USA



Upregulation and Functional Role of Hydrogen Sulfide Producing Enzymes in Cancer

Csaba Szabo,
 University of Fribourg, Switzerland



Oxidative Stress: Eustress and Distress

Helmut Sies,
 Heinrich Heine University Düsseldorf, Germany



Redox & Fasting 2020: Periodic Fasting Improves Blood Oxidative Stress Profile in Humans

Dimitrios Kouretas,
 University of Thessaly, Greece



Hemin-induced oxidative death –linked to labile iron

Melanie Merkel,
 University of Marburg, Germany



Probiotic Inhibition of Microbiota-mediated Oxidative Stress in the Gastrointestinal Tract

Stan Kubow,
 School of Human Nutrition, McGill University, Canada



Iron: Innocent bystander or vicious culprit in COVID-19 pathogenesis?

Marvin Edeas,
 Institute Cochin - University Paris Descartes, France



Systemic Oxidative Stress, Microbiota and Redox-Targeted Therapeutics in Inflammatory Bowel Disease

Arno Bourgonje,
 University Medical Center Groningen, The Netherlands



Effects of Photobiomodulation on Cancer Cells through the Reactive Species Interactome, Proteases and Bioenergetic Metabolism

Laurent Chatre,
 Université de Caen-Normandie, France



Integrating Signaling Pathways of Ferroptosis and Necroptosis at Mitochondria

Carsten Culmsee,
 University of Marburg, Germany



Interaction between Hydrogen Sulphide and Nitric Oxide in the Diabetic Cardiomyopathy

Jin-Song Bian,
 National University of Singapore, Singapore



Ferroptosis in the Heart

Fudi Wang,
 University School of Medicine, China



Red Blood Cells as a Central Hub in the Interaction among Reactive Species

Miriam Margherita Cortese-Krott,
 Heinrich Heine University Düsseldorf, Germany



An Unexpected Antiferroptotic Activity of a Sterol Metabolite

Jose Friedmann-Angeli,
 University of Würzburg, Germany



Mitochondria, Oxidative Stress and Preeclampsia

Enrique Terán,
 Universidad San Francisco de Quito, Ecuador



The Role of Oxidative Stress in the Initiation and Progression of Systemic Sclerosis

Udo Mulder,
 University of Groningen, The Netherlands



Regulation of Oxidative Stress and Cell Death by Lysosomal Iron

Jonathan Geiger,
 University of North Dakota, USA



Reductive Stress Causes Pathological Cardiac Remodeling and Diastolic Dysfunction

Rajasekaran Namakkal-Soorappan,
 University of Alabama at Birmingham, USA



Ferroptosis and Necroptosis in Stroke

Marietta Zille,
 University of Luebeck, Germany



www.isanh.net

22nd International Conference on
Oxidative Stress, Redox Homeostasis & Antioxidants
2020

October 7-9, 2020 – Virtual Congress & Workshop

Day 1 – Wednesday, October 7, 2020

Workshop
How to Evaluate Oxidative Stress &
Antioxidants Activities

Full agenda and information, please follow this link
<https://www.isanh.net/workshop/>

Paris Redox 2020 Conference

Day 2 – Thursday, October 8, 2020

07:45 Welcoming & Registration of Attendees

08:20 Opening of Paris Redox World Conference & Introduction Remarks

Harry van Goor, President of Paris Redox 2020, University Medical Center, Groningen, The Netherlands

08:30 Introduction to Redox 2020: Today & Tomorrow

Session 1 – Redox 2020: Recent Advances & Perspectives
Chairperson: Harry van Goor

09:10 Oxidative stress: Eustress and distress

Helmut Sies, Heinrich Heine University Düsseldorf, Germany

Redox & Fasting 2020: Periodic fasting improves blood oxidative stress profile in humans

Dimitrios Kouretas, University of Thessaly, Greece

Mitochondria, oxidative stress and preeclampsia

Enrique Terán, University San Francisco de Quito, Ecuador

Red blood cells as a central hub in the interaction among reactive species

Miriam Margherita Cortese-Krott, Heinrich Heine University Düsseldorf, Germany

Effects of Photobiomodulation on Cancer Cells through the Reactive Species Interactome, Proteases and Bioenergetic Metabolism

Laurent Chatre, CNRS, UNICAEN, CEA, Université de Caen-Normandie, France

11:20 Short oral presentations

Maximal exercise-induced oxidative damage to proteins depends on body composition in young men

Mateusz Mardyla, University of Physical Education in Krakow, Poland

The role of aquaporin-8 (AQP8) in cytokine-mediated beta-cell toxicity

Christina Schaal, Hannover Medical School, Germany

Session 2 – Microbiota Diversity, Redox and Inflammation

Chairperson: Stan Kubow

13:35 Probiotic inhibition of microbiota-mediated oxidative stress in the gastrointestinal tract

Stan Kubow, School of Human Nutrition, McGill University, Canada

Systemic oxidative stress, microbiota and redox-targeted therapeutics in inflammatory bowel disease

Arno Bourgonje, University Medical Center Groningen, The Netherlands

Session 3: ROS, RNS, RSS & Antioxidants: Recent Advances on Evaluation

Chairperson: Kenneth R. Olson

15:30 Are reactive sulfur species the new reactive oxygen species?

Kenneth R. Olson, Indiana University School of Medicine in South Bend, USA

Interaction between hydrogen sulphide and nitric oxide in the diabetic cardiomyopathy

Jin-Song Bian, Southern University of Science and Technology, China

Reductive Stress Causes Pathological Cardiac Remodeling and Diastolic Dysfunction

Rajasekaran Namakkal-Soorappan, the University of Alabama at Birmingham, USA

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

Isothiocyanates as H₂S-releasing agents and their antioxidant and cardioprotective effects

Valentina Citi, University of Pisa, Italy

Physical plasma as source of reactive species: cysteine as molecular beacon

Giuliana Bruno, Leibniz Institute for Plasma Science and Technology, Germany

Mechanisms of lung toxicity induced by biomass burning aerosols

Michal Pardo, Weizmann Institute of Science, Israel

Targeting cellular antioxidant defense system with redox-active molecules for fungal pathogen control

Jong Kim, Agricultural Research Service, United States Department of Agriculture, USA

Weak magnetic fields: a tool to manipulate ROS-Mediated stem cell proliferation and growth

Luke James Kinsey, Western Michigan University, USA

A novel method of every 12 hours of antioxidant supplementation to the human embryo culture media improves blastocysts quality

Israel Maldonado-Rosas, CITMER, Mexico

Involvement of oxidative stress in nickel oxide nanoparticles - induced damages in pulmonary artery endothelial cells

Ophélie Germande, CRCTB - INSERM U1045, France

The role of hydrogen sulfide (H₂S) and oxytocin receptor (OXTR) in preeclampsia

Sarah Ecker, Institute of Anesthesiological Pathophysiology and Process Engineering, Germany

The H₂S and the oxytocin systems in the hypothalamus of a porcine model of hemorrhagic shock with administration of sodium thiosulfate

Nicole Denoix, Clinic for Psychosomatic Medicine and Psychotherapy, Germany

17:00 End of the Second Day

Day 3 – Friday, October 9, 2020

Session 4: Redox Medicine: Innovations & Clinical Studies

Chairperson: Csaba Szabo

9:00 **Upregulation and functional role of hydrogen sulfide producing enzymes in cancer**
Csaba Szabo, University of Fribourg, Switzerland

The role of oxidative stress in the initiation and progression of systemic sclerosis
Udo Mulder, University of Groningen, The Netherlands

Redox targeting in anti-hypoxia Adenosinergic immunotherapy of cancer
Stephen Hatfield, Northeastern University, USA

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

Bioactive lipids-based therapeutic approach to cancer
Undurti Das, UND Life Sciences, USA

Antioxidants in male infertility treatment – Improving sperm motility
Biljana Markovska, PZU Plodnost Bilota, North Macedonia

Therapeutic ROS provide immunoprotection against malignant melanoma
Ramona Clemen, Leibniz Institute for Plasma Science and Technology, Germany

Session 5 - Cytokine Storm, Iron & Oxidative Stress in COVID-19 patients: A Vicious Circle

Chairperson: Carole Peyssonnaud

14:00 **Iron: Innocent bystander or vicious culprit in COVID-19 pathogenesis?**
Marvin Edeas, Institute Cochin - University Paris Descartes, France

Angiotensin-converting enzyme-2 (ACE2), SARS-CoV-2 and pathophysiology of coronavirus disease 2019 (COVID-19)
Harry van Goor, University Medical Center, Groningen, The Netherlands

Potential role of hydrogen gas in the treatment of Kawasaki disease
Ho-Chuang Kuo, Kaohsiung Chang Gung Memorial Hospital, Taiwan

Short oral presentations

Oxidative stress biomarkers for prediction of severity in COVID19
Morgane Ducastel, Cochin Hospital, APHP-CUP, France

Symposium

The crosstalk between ferroptosis, regulated necrosis and mitochondrial death signaling in human disease

Chairperson: Carsten Culmsee

15:00 **Integrating signaling pathways of ferroptosis and necroptosis at mitochondria**
Carsten Culmsee, University of Marburg, Germany

An unexpected antiferroptotic activity of a sterol metabolite
Jose Friedmann-Angeli, University of Würzburg, Germany

Ferroptosis in the heart
Fudi Wang, University School of Medicine, China

Regulation of oxidative stress and cell death by lysosomal iron
Jonathan Geiger, University of North Dakota, USA

Ferroptosis and necroptosis in stroke
Marietta Zille, University of Luebeck, Germany

Hemin-induced oxidative death – linked to labile iron
Melanie Merkel, University of Marburg, Germany

Role of necroptosis and iron deposits in traumatic brain injury
Antonia Clarissa Wehn, Ludwig Maximilian University of Munich, Germany

16:50 Short oral presentations

Oleuropein aglycone counteracts the oxidative stress in Alzheimer's disease by disrupting amyloid β fibrils: investigation of the mechanism of action of this polyphenol from extra virgin olive oil

Simone Brogi, University of Pisa, Italy

Characterization of photochemical properties of human red blood cells in oxidative stress conditions by fluorescence lifetime imaging microscopy

Amirali Rostam Davoudpour, Adam-Mickiewicz University Poznan, Poland

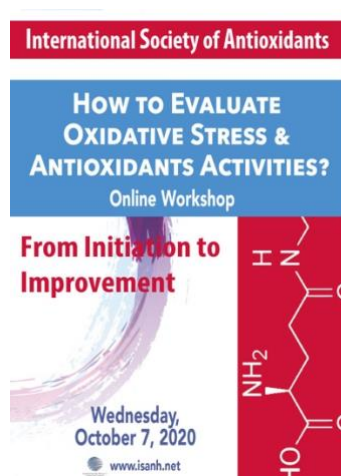
Does continuous OS reduction prevent and ameliorate diseases through species diversity of intestinal bacteria?

Fukka (Fuhua) You (Yang), Gifu University, Japan

17:30 Concluding remarks: Redox 2020

Paris Redox Scientific & Innovation Awards 2020

18:00 End of Paris Redox 2020 Congress



How to Evaluate Oxidative Stress & Antioxidants Activities?

Wednesday, October 7, 2020
Online Workshop

In collaboration with the International Society of Antioxidants (ISANH), we are pleased to announce the organization of the first workshop dedicated to **Oxidative Stress and Antioxidants Evaluation – How to Evaluate Oxidative Stress & Antioxidants activities?** which will be held one day before Paris Redox 2020 Congress, on October 7, 2020.

For more information: www.isanh.net/workshop