

25TH

International
Conference

REDOX MEDICINE

JUNE
21-23
2023
PARIS
FRANCE



PROGRAM
2023



Hallmarks of Aging & Redox Medicine: An Expanding Universe

Guido Kroemer, Université de Paris Cité, Hôpital Européen George Pompidou, France



Ferroptosis: A Decade Before and After the Coining

Marcus Conrad, Helmholtz Zentrum München, Germany



Redox Medicine 2023: What's Next?

Chandan K. Sen, Indiana University, USA



Redox Homeostasis and Sarcopenia: Targeting Mitochondria

Francesco Bellanti, University of Foggia, Italy



Chronobiology: The Reactive Species Interactome-Mitochondria Axis, the Hands of the Circadian Clock ?

Laurent Chatre, Normandie University, UNICAEN Cycleron, Centre national de la recherche scientifique (CNRS), France



A Redox Theory of Biological Regulation

Jérôme Santolini, Laboratoire Stress Oxydant et Détoxication, France



Awakening Adult Retinal Stem Cells: A New Function of NOX Signaling in the Xenopus Retina

Morgane Locker, Université Paris-Saclay, France



Redox Balance as a Biomarker: Towards Personalized Interventions for Health

Dong-Yun Shi, Fudan University, China



Effects of Reactive Sulfur Species in Macrophage Activation and Regulation of Apoptosis/Necrosis Pathways in Cancer Cells

Moran Benhar, Technion University, Israel



Friedreich's Ataxia: the Pathological Iron-redox Axis Revisited

Benoit D'Autréaux, Paris-Saclay University, France



Redox Medicine in the Anthropocene How do we make it work?

Martin Feelisch, University of Southampton, United Kingdom



- Ferroptosis 2023: New Insights & Discoveries

- Targeting Mitochondrial Copper: Therapeutic Strategies

Raphael Rodriguez, Institut Curie, France



Redox Medicine, Mitochondria & Aging: The Underestimated Link

Amalia M. Dolga, University of Groningen, The Netherlands



Antibacterial Strategies Based on Reactive Oxygen Species

Wee Han Ang, National University of Singapore, Singapore



Precision Redox: The Key for Antioxidant Pharmacology

Chang Chen, Institute of Biophysics, Chinese Academy of Sciences, China



The Skin Redoxome: Perspectives in Photodamage and Sun Care

Mauricio S. Baptista, Universidade de São Paulo, Brazil



The Determination of Intracellular Labile Ironome for Diagnosis and Prognosis of Iron-Related Disorders: the Example of Friedreich's Ataxia

Charareh Pourzand, University of Bath, United Kingdom



Mitochondrial Involvement in Different Model Systems of Ferroptosis

Melanie Merkel, Philipps-Universität Marburg, Germany



Redox Medicine & Signaling: Molecular Mechanisms Underlying Age-Related Muscle Decline

Robert A Heaton, University of Liverpool, United Kingdom



Arsenic-Copper: A Double-Edged Sword against Immunological Disorders

Carole Nicco, President of RMS, Université de Paris, France and BioSenic SA, Belgium



REDOX-MEDICINE.COM

The International Conference on Redox Medicine 2023, to be held June 21-23, will be organized to bring together academic and industry experts in redox to discuss advances and recent innovation in this vast field. We will highlight recent clinical applications of antioxidants in health and disease. We will spend more time covering all the devices and methods for the assessment of oxidative stress.

Reactive oxygen species (ROS) have been studied for decades, but the results remain controversial. ROS are beneficial to biological mechanisms, yet they also have harmful effects such as causing tissue and organ damage. The work and results presented at the Redox Medicine Congress will give us the opportunity to view ROS from a different dimension that may explain the conflicting results or provide a broader perspective. The exchange of ideas will help us to think differently about the neglected features and potentials of ROS, to relate medicine to redox balance, and to explore the mechanisms described in other disciplines.

In an era of increasing health challenges, it is imperative that we seriously consider the innovative alternatives offered by organic and inorganic redox-active compounds. It has significantly diversified the field of redox medicine, paving the way for visionary approaches to the development of biotechnology and healthcare. The translation of many disciplines in which the fields of redox biology and free radical research have brought important scientific advances to society, the clinic, and industry will help strengthen our field. One of our main goals is to also connect redox drugs with other key players: mitochondrial and microbiotal medicine.

I am delighted to be the President of the Society of Redox Medicine to bring you the 2023 Paris International Conference on Redox Medicine with the latest advances in this field, to help each of us establish strong interactions and strengthen our underlying technology and knowledge sharing networks in basic and clinical redox research and medicine.

We look forward to meeting you during our 25th anniversary this June.

All our best regards,



Dr. Carole Nicco,
President of Redox Medicine Society

Day 1 - Thursday, June 22, 2023

8h00 Welcoming of attendees & Badge Distribution



8h50 **General Introduction of Redox Medicine 2023:**

Carole Nicco, *President of Redox Medicine Society, Institut Cochin - INSERM U1016, Université de Paris BioSenic SA, Belgium*



9h00 **Keynote Speech on Hallmarks of Aging & Redox Medicine: An Expanding Universe**

Guido Kroemer, *Université de Paris Cité, Hôpital Européen George Pompidou, France*

Session 1: Oxidative Stress & Antioxidants: A Step Closer to Redox Medicine



9h30 **Redox Medicine in the Anthropocene – How do we make it work?**

Martin Feelisch, *University of Southampton, United Kingdom*



10h00 **A Redox Theory of Biological Regulation**

Jérôme Santolini, *Laboratoire Stress Oxydant et Détoxication, France*

10h30 – 11h00 Coffee Break & Networking



11h00 **Awakening Adult Retinal Stem Cells: A New Function of NOX Signaling in the Xenopus Retina**

Morgane Locker, *Université Paris-Saclay, France*



11h30 **Cross-talk Chronobiology: The Reactive Species Interactome-Mitochondria Axis, the Hands of the Circadian Clock?**

Laurent Chatre, *Normandie University, UNICAEN Cyceron, CNRS, France*



12h00 **Antibacterial Strategies Based on Reactive Oxygen Species**

Wee Han Ang, *National University of Singapore, Singapore*

12h30 – 14h00 Lunch Break & Networking

Session 2: Ferroptosis 10 Years Later: What's Next?



14h00 **Ferroptosis: A Decade Before and After the Coining**
Marcus Conrad, Helmholtz Zentrum München, Germany



14h30 **Ferroptosis 2023: New Insights & Discoveries**
Raphael Rodriguez, Institut Curie, France



15h00 **The Determination of Intracellular Labile Ironome for Diagnosis And Prognosis of Iron-Related Disorders: The Example of Friedreich's Ataxia**
Charareh Pourzand, University of Bath, United Kingdom



15h30 **Mitochondrial Involvement in Different Model Systems of Ferroptosis**
Melanie Merkel, Philipps-Universität Marburg, Germany

16h00 – 16h30 Coffee Break & Networking

16h30 – **Short Oral Presentations**

In Vitro Study of the Implication of Reactive Species Interactome and Bioenergetics Metabolisms in the Cellular Response of Glioblastoma Cells Treated with a SOD-Mimetic Agent Combined to X-rays Irradiation, Under Normoxic or Hypoxic Condition

Elise Malard, Université de Caen Normandie, France

The Link Between Alzheimer's Disease and Ferroptosis-Related Pathways

Nada Majemiková, University of Groningen, The Netherlands

Unveiling Lipopolysaccharide-induced Brain Region-dependent Iron Metabolism and Microglial Changes and Modulation by Iron Pre-treatment in C57BL/6J Mice

Po-Wah So, King's College London, United Kingdom

17h30 – **End of Conference Day 1**

20h00 – **Speakers' Dinner (For ticket holders only)**

Day 2 - Friday, June 23, 2023

8h55 **Opening of the second day**

Session 3: Redox Medicine in Health & Diseases: Innovations, & Strategies



9h00 **Targeting Mitochondrial Copper: Therapeutic Strategies**

Raphael Rodriguez, Institut Curie, France



9h30 **Arsenic-Copper: A Double-Edged Sword against Immunological Disorders**

Carole Nicco, Institut Cochin - INSERM U1016, Université de Paris, France

BioSenic SA, Belgium



10h00 **Effects of Reactive Sulfur Species in Macrophage Activation and Regulation of Apoptosis/Necrosis Pathways in Cancer Cells**

Moran Benhar, Technion University, Israel

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11h00 **Friedreich's Ataxia: The Pathological Iron-redox Axis Revisited**

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14h00 **Precision Redox: The Key for Antioxidant Pharmacology**

Chang Chen, *Institute of Biophysics, Chinese Academy of Sciences, China*



14h30 **Redox Homeostasis and Sarcopenia: Targeting Mitochondria**

Francesco Bellanti, *University of Foggia, Italy*



15h00 **Redox Medicine, Mitochondria & Aging: The Underestimated Link**

Amalia M. Dolga, *University of Groningen, The Netherlands*

15h30 – 16h00 Coffee Break & Networking



16h00 **Redox Balance as a Biomarker: Towards Personalized Interventions for Health**

Dong-Yun Shi, *Fudan University, China*

16h30 **Short Oral Presentations**

Mitochondrial assays in your hands by Agilent

Christophe Iochem, Agilent, France

A New Electrochemical Device for Total Antioxidant Activity Determination in Biological Samples

Henar Muñoz-Cimadevilla, Bioquochem SL, Spain

Formation of Neutrophil Extracellular Traps (Nets): Study by Atomic Force Microscopy

Viktoria Sergunova, V.A. Negovsky Research Institute of General Reanimatology, Russian Federation

Reductase 1 (TR1) Modulates Pigmentation and Photobiology of Murine Melanocytes *in vivo*

Arup Kumar Indra, Oregon State University, USA

Antioxidant Capacity Biomarkers, A Path Forward to Develop Ros-inducing Drugs for Cancer Therapy

Nikolas Gunkel, Deutsches Krebsforschungszentrum (DKFZ), Germany

Influence of Reactive Oxygen Species on Red Blood Cell Morphology, Membrane and Cytoskeleton

Nanostructure: Atomic Force Microscopy Study

Elena Kozlova, V.A. Negovsky Research Institute of General Reanimatology, Russian Federation

Mitochondria-Related Oxidative Stress: An Unexplored Field in Diverticular Disease

Martina Cappelletti, Sapienza Universita' Di Roma, Italy

17h00 – 18h00

5 Minutes - Pitch: Dedicated to Start-ups, Academics, Industries & Investors

Redox Medicine 2023 will dedicate significant time to all actors and players in the redox field to share their latest projects and innovations. [More details on innovations and abstract submission.](#)



18h00 - Concluding Remarks – Redox Medicine 2023: What's Next?

Chandan K. Sen, Editor in Chief of *Antioxidants & Redox Signaling Journal*, Indiana University, USA

18h30 – **Awards of Redox Medicine Society 2023**

19h00 – **End of Redox Medicine Society 2023**