

World Mitochondria Society



7th World Congress on

Targeting Mitochondria

October 24-26, 2016

Maritim ProArte Hotel

Berlin, Germany

Program

www.targeting-mitochondria.com

Welcome to Targeting Mitochondria 2016

Dear Colleagues,

The Scientific Committee of World Mitochondria Society is honored to announce the 7th World Congress on Targeting Mitochondria to be held at Hotel Maritim ProArte in Berlin, Germany on October 24-26, 2016.

This 7th World Congress on Targeting Mitochondria will cover a variety of new strategies and innovations as well as clinical applications in Mitochondrial Medicine. Just as for the previous editions of "Targeting Mitochondria", the scientific committee has again succeeded in inviting a remarkable panel of speakers, each of who are leaders in their particular field.

Among hot topics which will be highlighted this year:

Recent advances on mitochondrial dysfunctions in chronic diseases

- Mitochondria & Microbiota: the intriguing relationship
- Mitochondria & Redox Regulation
- Mitochondria & Viral Infection
- Mitochondria & Metabolic Syndrome
- Mitochondria & Neurodegenerative Diseases
- Mitochondria & Cancer

How to evaluate mitochondria function/dysfunction?

- Mitochondria Quality Control
- Mitochondria Devices: New methods to detect mitochondria dysfunction
- Mitochondria as Biomarkers
- Presentation of Practical Cases

Strategies to target mitochondria: recent clinical studies and potential therapeutic studies

- Strategies to target Stem Cells
- Strategies to target Microbiota
- Strategies to target miRNA
- Strategies to reimplace mitochondria
- Clinical & Therapeutic Directions

Special Session dedicated to the evaluation of mitochondria in vivo and in humans

A special session is organized on day 2 to highlight all methods which allow the investigation and studying of mitochondria in physiologic and pathologic conditions. We will talk more about mitochondria evaluation in human clinic.

We are pleased to invite all scientific and industrial teams to present their strategies and innovations during Targeting Mitochondria World Congress 2016.

With this exciting program, we look forward to welcoming you in Berlin for this particular event.

Pr Volkmar Weissig

President of World Mitochondria Society



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7th World Congress on

Targeting Mitochondria

October 24-26, 2016 – Berlin, Germany

Day 1 – Monday, October 24

8h00 Welcoming & Registration of Attendees

8h55 Welcome Introduction by Pr Volkmar Weissig, President of the World Mitochondria Society

Session 1: Targeting Mitochondria 2016:
Recent Advances on Mitochondrial Dysfunctions in Chronic Diseases: The Mechanistic

Chairpersons: Robert Friedlander & Martin Picard

9h00 Mitochondrial protein import defect in Huntington's disease
Robert Friedlander, UPMC Presbyterian Hospital, USA

9h25 How mitochondrial functions modulate neuroendocrine, metabolic and transcriptional responses to acute psychological stress
Martin Picard, Columbia University Medical Center, USA

9h50 Glutamine addiction and mitochondrial stability in tumor cells
Vladimir Gogvadze, Karolinska Institutet, Sweden

10h15 Mitochondrial ROS in neutrophil-mediated inflammation and autoimmunity
Christian Lood, University of Washington, USA

10h40 Coffee Break & Poster Session

11h15 Mitochondrial DNA recombination, repair and segregation: recent scientific data and perspectives
André Dietrich, Université de Strasbourg, France

11h40 Mitochondrial fusion may explain alcohol's effect on muscle
György Hajnóczky, Thomas Jefferson University, USA

12h05 Glutathione depletion induces mitochondrial damage through CYLD and associated pathways of regulated necrosis
Carsten Culmsee, University of Marburg, Germany

12h30 Lunch Break & Poster Session

Chairpersons: André Dietrich, Miria Ricchetti

14h00 Tissue specificity of mitochondrial energy metabolism
Frank Norbert Gellerich, Otto-von-Guericke University, Germany

14h25 Contribution of gut-derived bacterial LPS to mitochondrial dysfunction, oxidative stress and inflammation in human adipocytes
Lucia Martinez de la Escalera, Warwick Medical School, United Kingdom

14h35 Mitochondria is a major regulator of nuclear gene expression
José Francisco Iborra, Centro Nacional de Biotecnología (CSIC), Spain



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- 14h45 **Mitochondrial metabolism and thyroid hormones: a game of influence over adult neural stem cell fate decision?**
Jean-David Gothié, Museum National d'Histoire Naturelle, France
- 14h55 **Endoplasmic reticulum stress mediates mitochondrial dysfunction in human adipocytes which is exacerbated in obesity**
Laura Jackisch, University of Warwick, United Kingdom
- 15h05 **Control of electron transport chain flux by cytochrome C threonine 28 phosphorylation in kidney: implications for AMP Kinase**
Maik Hüttemann, Wayne State University School of Medicine, USA
- 15h15 **Enhanced repair of mitochondrial DNA repair confers protection against diet-induced obesity and metabolic syndrome**
Harini Sampath, Rutgers, The State University of New Jersey, USA
- 15h25 *Coffee Break & Poster Session*
- Chairpersons: Vladimir Gogvadze, Volkmar Weissig**
- 16h10 **Metabolites from the gut microbiota of healthy long-living persons affect mitochondria**
Miria Ricchetti, Institut Pasteur, France
- 16h35 **Genetic dysfunction of the mitochondrial respiratory chain impairs proteasome activity**
Silke Meiners, Helmholtz Zentrum München, Germany
- 16h45 **Browning-inducers modify the differentiation of human adipocytes from different anatomical sites and enhance their mitochondrial respiration**
Kristóf Karoly Endre, University of Debrecen, Hungary
- 16h55 **Mitochondrial mechanisms of tolerance to intermittent hypoxia: Insights from new invertebrate models**
Inna Sokolova, University of Rostock, Germany
- 17h05 **Physiological calcium transients are critical for maintaining the functional integrity of mitochondria in skeletal muscle**
Jingsong Zhou, Kansas City University of Medicine and Bioscience, USA
- 17h15 **Modulation of mitochondrial calcium uniporter complex in ischemic stroke**
Babu Karthik Mallilankaraman, National University of Singapore, Singapore
- 17h25 **Malic enzyme-2 and its role in maintaining mitochondrial respiration in HEK-293 cells**
Kerry Loomes, University of Auckland, New Zealand
- 17h35 **PINK1-mediated mitochondrial signaling in health and Parkinson disease**
Lih-Shen Chin, Emory University School of Medicine, USA
- 17h45 **The role of PKCdelta-signalosome in mitochondrial energetic**
Ulrich Hammerling, Memorial Sloan-Kettering Cancer Center, USA
- 17h55 **Regulatory mechanisms of dynamin-related protein 1 (DRP1) and its influence on apoptosis in breast cancer**
Kelly Jean Craig, Colorado Mesa University, USA
- 18h05 **Progression of pathology in PINK1-deficient mouse brain from splicing via ubiquitination and mitophagy changes to neuroinflammation**
Georg Auburger, Goethe University Medical School, Frankfurt am Main, Germany
- 18h15 **Long and short-term exposure to nitrogen dioxide (NO₂) by inhalation induces mitochondrial and contractile dysfunction linked to impaired respiratory chain complex activity and ROS production**
Ahmed Karoui, UFR of Medicine and Pharmacy, France
- 18h25 **End of the first day**



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Day 2 – Tuesday, October 25

8h55 Opening of the second day

Session 2: How to Evaluate Mitochondria Function/Dysfunction?

Chairpersons: Egbert Mik, William Sivitz

9h00 **Monitoring mitochondrial oxygenation and oxygen consumption: first clinical experiences**
Egbert Mik, Erasmus MC, The Netherlands

9h25 **Novel findings using ADP recycling methodology to assess mitochondrial function and ATP production**
William Sivitz, University of Iowa, USA

9h50 **Mitochondrial toxicology: Rescuing mitochondria in Wilson disease avoids acute liver failure**
Hans Zischka, Institute of Molecular Toxicology and Pharmacology, Germany

10h15 **Mitochondrial dysfunction and glucose uptake**
Werner Koopman, Radboud University Medical Centre, The Netherlands

10h40 Coffee Break & Poster Session

11h25 **Measuring mitochondrial fuel dependency and flexibility in live cells using Seahorse XF analyzer**
Sofia Vikstrom, Agilent Technologies, Denmark

11h50 **A molecular biosensor reveals regulation of mitochondrial protein import by the PINK1 kinase-driven Parkin ubiquitin ligase**
Olga Corti, Institut du Cerveau et de la Moelle épinière, France

12h00 **Effects of radiation therapy on mitochondria complex-I activity in tumor cells inoculated in mice**
Hideo Tsukada, Hamamatsu Photonics, Japan

12h10 **Selective and targeted irradiation of mitochondria: microbeams as a highly selective tool to probe the cytoplasm**
Dietrich Walsh, Universität der Bundeswehr München, Germany

12h20 **Characterization of cell protection effects of Twendee X by oxidative stress**
Haruhiko Inufusa, Gifu University, Japan

12h30 **Development of mitochondria-targeted imaging nanoplatfrom by incorporation of carbon quantum dots**
Hong Bi, Anhui University, China

12h40 **Mitochondrial GWA analysis in several complex diseases using the KORA population**
Antonia Flaquer, Helmholtz Zentrum München, Germany

12h50 Lunch Break & Poster Session

Chairpersons: Lori Buhlman, Hans Zischka

14h00 **Submitochondrial localization of biomolecules by diffraction-unlimited fluorescence microscopy**
Anna Smirnova, University of Strasbourg, France

14h10 **Profiling of environmental chemicals for mitochondrial dysfunction**
Menghang Xia, US NCATS/NIH, USA

14h20 **Landscaping of the human mitochondrial RNome by CoLoc-seq**
Damien Jeandard, UMR "Génétique Moléculaire, Génomique, Microbiologie", France



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- 14h30 **Inhibition of hydrogen sulfide biosynthesis sensitizes lung adenocarcinoma to chemotherapeutic drugs by inhibiting mitochondrial DNA repair and suppressing cellular bioenergetics**
Bartosz Szczesny, University of Texas Medical Branch, USA
- 14h40 **Drainage of fatty acids from blood in a liver-specific manner -associated with increased hepatic mitochondrial fatty acid oxidation, lowering triacylglycerol levels in liver and plasma.**
Carine Lindquist, University of Bergen, Norway
- 14h50 **Perturbation of mitochondrial dynamics in alcoholic liver disease**
Elena Palma, Institute of Hepatology, Foundation for Liver Research, United Kingdom
- 15h00 **Clinical ischemia reperfusion injury directly associates with post-reperfusion metabolic failure**
Jan Lindeman, Leiden University Medical Center, Netherlands

Session 3: Strategies to target Mitochondria: Recent Clinical & Potential Therapeutic Studies (part 1)

Chairpersons: Marvin Edeas, Martin Bergö

- 15h10 **Mitochondria-targeted therapy: challenges and hurdles of drug discovery process**
Fernanda Borges, University of Porto, Portugal
- 15h35 **Mitochondria targeted nanoparticle for regenerative therapy of stroke**
Shanta Dhar, University of Miami, USA
- 16h00 *Coffee Break & Poster Session*
- 16h40 **Cancer metabolism and mitochondrial function: a therapeutic perspective**
Michael Lisanti, The Breast Cancer Now Manchester Research Unit, United Kingdom
- 17h05 **Antioxidant-induced progression of lung cancer, malignant melanoma, and intestinal cancer**
Martin Bergö, University of Gothenburg, Sweden
- 17h30 **Optimizing nature: targeting mitochondria with enhanced natural antioxidants**
Paulo Oliveira, University of Coimbra, Portugal
- 17h55 **Mitochondrial chaperone TRAP1 as a therapeutic target in Parkinson disease**
Lian Li, Emory University, USA
- 18h05 **Role of Parkin in innate immunity: crosstalk between mitochondrial dysfunction and NLRP3 inflammasome signaling**
François Mouton-Liger, ICM - Brain & Spine Institute, France
- 18h15 **Metabolic re-programming in cancer cells: lipogenesis, oxidative stress, and the mitochondrial connect**
Deepa Perinkulam Ravi, Birla Institute of Technology & Science, India
- 18h25 **Distinct separation of cardiac subsarcolemmal and interfibrillar mitochondria: mission impossible?**
Ulrike Hendgen-Cotta, University Hospital Essen Medical Faculty, Germany
- 18h35 **End of the second day**
- 20h00 **Targeting Mitochondria Dinner**
To participate, please contact the registration desk.



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Day 3 – Wednesday, October 26

8h55 Opening of the third day

Session 3: Strategies to target Mitochondria: Recent Clinical & Potential Therapeutic Studies (part 2)

Chairpersons: Fernanda Borges, Ivan Tarassov

9h00 **Clinical trials with SkQ1: recent scientific data and perspectives**
Vladimir Skulachev, University of Moscow, Russia

9h25 **A powerful mitochondria-targeted iron chelator affords high photoprotection against solar UVA radiation**
Olivier Reelfs, University of Bath, United Kingdom

9h50 **Parkin loss-of-function causes increased protein oxidation in mitochondria and decreased mitophagy induction in Drosophila dopaminergic neuron clusters**
Lori Buhlman, Midwestern University, USA

10h15 **Mitochondrial targeting of RNA as a tool for therapy**
Ivan Tarassov, CNRS, France

10h40 Coffee Break & Poster Session

11h20 **Probing MT-ATP6 mutations using iPSC-derived neural cells**
Carmen Lorenz, Max-Delbrueck Center for Molecular Medicine, Germany

11h45 **Role of miR-181 family in the heart: a tale of two intracellular compartments**
Samarjit Das, Cardiac Pathology, USA

12h10 **Subunit of mitochondria and hypertension control via miRNA**
Dao Wen Wang, Huazhong University of Science and Technology, China

12h35 **Retrograde stress regulator MNRR1 participates in the UPR^{MT} and is turned over within mitochondria by YME1L1**
Lawrence Grossman, Wayne State University School of Medicine, USA

13h00 Lunch Break & Poster Session

Chairpersons: Marvin Edeas, Volkmar Weissig

14h15 **Perturbation in cardiac energy metabolism is linked to radiation-induced heart disease**
Omid Azimzadeh, Helmholtz Zentrum München, Germany

14h25 **Nephrotoxic effects of cis-diamminedichloroplatinium II (cisplatin) can be ameliorated using Coenzyme Q10 (CoQ10)**
Luis Vitetta, The University of Sydney, Australia

14h35 **Prevention of mitochondrial disease caused by mtDNA mutation through mitochondrial replacement therapy (MRT)**
Zitao Liu, New Hope Fertility Center, USA

14h45 **Carotenoids and mitochondria respiration in health, ageing and pathology**
Ivan Petyaev, Lycotec, United Kingdom

14h55 **Quinic acid activates insulin-secreting cells by mobilizing Ca²⁺ and therefore boosting mitochondrial function**
Umberto de Marchi, Nestlé Institute of Health Sciences, Switzerland



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- 15h05 **Multifunctional mitochondria and siRNA nanomedicine to treat triple-negative breast cancer**
Ching Tung, Cornell Medical College, USA
- 15h15 **Direct pharmacological targeting of a mitochondrial ion channel selectively kills tumor cells in vivo**
Luigi Leanza, University of Padova, Italy
- 15h25 **Therapeutic hypothermia attenuates mitochondrial release of apoptosis effectors in OGD/R-injured cardiomyocytes**
Jana Krech, Deutsches Herzzentrum Berlin, Germany
- 15h35 **Bioenergetic adaptations of the human liver in two-stage hepatectomy with portal vein ligation – how liver regeneration correlates with mitochondrial energy status**
Henrique Alexandrino, Hospitais da Universidade de Coimbra, Portugal
- 15h45 **The nuclear form of heme oxygenase-1 promotes glycolysis and restricts oxidative phosphorylation during oxidative stress**
Phyllis Dennerly, Brown University, USA
- 15h55 **Inhibition of mitochondrial complex I triggers autophagy-dependent cell death in melanoma**
Farhan Basit, Radboud Institute of Molecular Life Sciences, Netherlands
- 16h05 **Mitochondrial electron transport chain complex III activity is essential for neural differentiation of mouse P19 cell line**
Natalia Pashkovskaia, Technische Universität Dresden, Germany
- 16h15 *Coffee Break & Poster Session*
- 16h45 **Discussion & Concluding Remarks by Marvin Edeas & Volkmar Weissig**
Targeting Mitochondria 2016 Awards
- 17h30 **End of Targeting Mitochondria 2016**

