7th World Congress on Targeting Mitochondria

October 24-26, 2016

Maritim ProArte Hotel
Berlin, Germany

Program

www.targeting-mitochondria.com
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 replace 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
World Mitochondria Society

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
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
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 nanoplatform 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
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)  
_Choirperson: 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._
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 UPRmt 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, Volkmart 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-diaminedichloroplatinum 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
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*, Hospital da Universidade de Coimbra, Portugal

15h45  The nuclear form of heme oxygenase-1 promotes glycolysis and restricts oxidative phosphorylation during oxidative stress  
*Phyllis Dennery*, 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