World Mitochondria Society

Targeting Mitochondria World Congress 2018

Targeting Mitochondria 2018

October 23-25, 2018
Steigenber Hotel Berlin, Germany

www.targeting-mitochondria.com
Congress Tracks:
- Recent advances on mitochondrial dysfunctions and dynamics in chronic diseases: the mechanistics
- The challenge of qualitative and quantitative assessment of mitochondrial function in vitro and in vivo
- Mitochondria & microbiota intertalk
- Strategies to target mitochondria: clinical trials and potential mitochondria-based therapies
- Special workshop: Mitochondria & ageing

Targeting Mitochondria 2018 Speakers

Voikmez Wessig
President of WMS, Midwestern University, USA

Using live imaging to investigate the causes and consequences of mitochondrial toxicity in the kidney
Andrew Hall
University of Zurich, Germany

Therapeutic application of specific near-infrared light wavelengths that inhibit cytochrome C oxidase results in robust neuroprotection
Malik Hüttemann
Wayne State University School of Medicine, USA

The transcriptomic and proteomic landscape of mitochondrial dysfunction in mouse
Inge Kühni
CNRS - I2BC, France

Mechanism and therapeutic potential of cyclophilin inhibitors for prevention of mitochondrial myopathy progression
Håkan Westerblad
Karolinska Institute, Sweden

The legal framework for mitochondrial therapy: Identifying and preventing legal pitfalls within the translation from bench to bedside
Timo Fantes
Martin-Luther-Universität Halle-Wittenberg, Germany

Targeting mitochondrial metabolism, geroprotection to treating Alzheimer’s disease
Antonio Currais
The Salk Institute for Biological Studies, USA

Metabolic switches saving mitochondria from oxidative stress
Carsten Gilianne
Universitat Münster, Germany

Genetics of mitochondrial morphofunction
Winnet Koegman
RadboudUMC University, The Netherlands

Reversing wrinkled skin and lost hair in mice by restoring mitochondrial function
Keshav Singh
University of Alabama at Birmingham, USA

Microbiota-Mitochondria Interactions
Marvin Edgues
Institut Cochin, Université Paris Descartes, France

Mitochondrial involvement in cell life/death regulation: Presentation of new scientific results
Vladimir Gogvadze
Karolinska Institute, Sweden

Mitochondrial fission in human diseases
Michaela N. Swenson
Icahn School of Medicine at Mount Sinai, USA

Foxp3 increases oxidative phosphorylation and NAD oxidation, adapting regulatory T cells to low glucose high lactate environments
Alessio Angelin
Children’s Hospital of Philadelphia, USA

Mitochondrial potassium channels: new regulation mechanisms?
Adam Spiewczyk
Nencki Institute of Experimental Biology, Poland

Phase 2 motor study of Oxyureatoxins in patients with mitochondrial myopathies
John Vissing
Copenhagen University, Denmark

Utilizing a human hepatoma cell line to study off-target effects of drugs on mitochondrial DNA maintenance and bioenergetics
Matthew Young
Southern Illinois University School of Medicine, USA

The mitochondrial link to cocaine addiction: Recent scientific advances
Mary Kay Lobo
University of Maryland School of Medicine, USA

Mitochondrial dynamics in cell life and death
Luca Scorrano
University of Padova, Italy

Healing the heart through mitochondrial dynamics: a love-hate relationship
Sang-Bing Ong
Duke-NUS Medical School, Singapore

Key dates:
- Early Bird Registration
  - Sept. 24, 2018
- Short Oral Submission
  - Sept. 5, 2018
- Poster Submission
  - Sept. 27, 2018
Dear Colleagues and Friends,

I am excited and honored to announce on behalf of the Scientific Committee of the World Mitochondria Society the 9th World Congress on Targeting Mitochondria, which will be held in Berlin, Germany, on October 23-25, 2018.

The overarching themes of our 9th World Congress on Targeting Mitochondria will not significantly deviate from topics discussed at preceding editions of our conference series. Again we will focus on three major areas, which are first the role of mitochondrial dysfunction in etiology and pathogenesis of chronic diseases, second how to assess and above all quantify mitochondrial dysfunction in vitro and in vivo and finally, third, how to target and manipulate mitochondrial function in order to develop future mitochondria-based therapies.

However, this year we will also focus on the cross-talk between mitochondria and microbiota as well as on mitochondrial dynamics in health and disease. Furthermore, we will address nutritional and pharmaceuticals interventions for mitochondrial respiratory deficiencies and we will highlight the role of mitochondria in the process of aging.

For the 9th edition of “Targeting Mitochondria”, the scientific committee has again succeeded in inviting key players in Mitochondrial Medicine, i.e. investigators who have been pushing the progress in their particular field of mitochondrial research over the last few years (a few invitations are still pending). Basic researches working at the bench in the laboratory, physicians treating patients suffering from mitochondrial disorders as well as representatives of companies working on the commercialization of mitochondria-targeted therapies are all welcome to our conference. We strongly believe that our 9th World Congress on Targeting Mitochondria will be at least as exciting and as successful as many of our previous meetings.

Our conference will involve the following sessions, for more details please see our preliminary program below.

- Recent advances on mitochondrial dysfunction and dynamics in etiology and pathogenesis of human diseases: the mechanistics
- The challenge of qualitative and quantitative assessment of mitochondrial function in vitro and in vivo
- Mitochondria & Microbiota Intertalk
- Strategies to target mitochondria: Clinical trials and potential mitochondria-based therapies
- Special workshop on Mitochondria and ageing

As always, we very much look forward to seeing you in Berlin for this exciting event.

Prof. Volkmar Weissig
President of the World Mitochondria Society
Midwestern University, USA
9th World Congress on
Targeting Mitochondria
October 23-25, 2018 – Steigenberger Hotel, Berlin, Germany

Scientific Preliminary Agenda

Day 1 – Tuesday October 23, 2018

17h00 – 18h00  Registration & material delivery

Day 2 – Wednesday October 24, 2018

7h45  Welcoming & Registration of Attendees

8h45  Opening ceremony by Targeting Mitochondria World Congress Chairmen

Session 1: Recent advances on mitochondrial dysfunctions and dynamics in chronic diseases: the mechanistics
9h00 – 15h00

FOX3 increases oxidative phosphorylation and NAD oxidation, adapting regulatory T cells to low glucose high lactate environments.
Alessia Angelin, Children’s Hospital of Philadelphia, USA

Targeting mitochondrial metabolism, geroprotection to treating Alzheimer’s disease
Antonio Currais, The Salk Institute for Biological Studies, USA

Healing the heart through mitochondrial dynamics: a love-hate relationship
Sang-Bing Ong, Duke-NUS Medical School, Singapore

Mitochondrial fission in human diseases
Madhavika N. Serasinghe, Icahn School of Medicine at Mount Sinai, USA

10h40  Coffee Break & Poster Session

Metabolic switches saving mitochondria from oxidative stress
Carsten Culmsee, University of Marburg, Germany

Utilizing a human hepatoma cell line to study off-target effects of drugs on mitochondrial DNA maintenance and bioenergetics
Matthew Young, Southern Illinois University School of Medicine, USA

The mitochondrial link to cocaine addiction: recent scientific advances
Mary Kay Lobo, University of Maryland School of Medicine, USA

Mitochondrial involvement in cell life/death regulation: presentation of new scientific results
Vladimir Gogvadze, Karolinska Institute, Sweden

Mitochondrial dynamics in cell life and death
Luca Scorrano, University of Padova, Italy

MNRR1 (CHCHD2) and mitochondrial UPR: a novel nexus
Lawrence Grossman, Wayne State University, USA
13h00  Lunch Break, Networking & Poster Session

Mitochondrial potassium channels: new regulation mechanism?
Adam Szewczyk, Nencki Institute of Experimental Biology, Poland

The transcriptomic and proteomic landscape of mitochondrial dysfunction in mouse
Inge Kühl, CNRS - Institut de Biologie Intégrative de la cellule, France

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

Ipsc-derived neuronal/astrocyte composite cultures identify functional and bioenergetic defects in leigh syndrome patients carrying surf1 mutations
Gizem Inak, MDC Berlin, Germany

Brucella-infected cells display a fragmented mitochondrial population that does not change cell sensitivity to TNF-α-induced apoptosis
Thierry Arnould, University of Namur, Belgium

Mitochondrial dysfunction in Alzheimer’s disease: differential impact of amyloid precursor protein-derived fragments
Mounia Chami, Université Côte d’Azur, France

Leukotriene B4 induces mitochondrial dysfunction in skeletal muscle by mediating oxidative stress and inflammation
Mohamad Hafizi Abu Bakar, Universiti Sains Malaysia, Malaysia

Mitochondrial dysfunction activates innate immunity via toxic RNA
Jana Key, Goethe University Frankfurt, Germany

Session 2: The challenge of qualitative and quantitative assessment of mitochondrial function in vitro and in vivo
15h00 – 19h15

Cellomics of mitochondrial morphofunction
Werner Koopman, RadboudUMC University, The Netherlands

Using live imaging to investigate the causes and consequences of mitochondrial toxicity in the kidney
Andrew Hall, University of Zurich, Switzerland

16h30  Coffee Break, Networking & Poster Session

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

A luminescent assay for mitochondrial injury measurement upon targeting mitochondria by DNAi
Saman Hosseinkhani, Tarbiat Modares University, Iran

Dedicated surveillance mechanism controls G-quadruplex forming non-coding RNAs in human mitochondria.
Roman J. Szczesny, Institute of Biochemistry and Biophysics PAS, Poland

Nicotinic acetylcholine receptors regulate mitochondria-driven apoptosis
Maryna Skok, Palladin Institute of Biochemistry, Ukraine

Synaptic activity mediates gene transcription-dependent metabolic plasticity in neurons
Carlos Bas Orth, University of Heidelberg, Germany
Mitochondria: central players in microglia-neuron interactions
Csaba Cserep, Hungarian Academy of Sciences, Hungary

Harmonizing mitochondrial DNA alignment across genetics
Walther Parson, The Pennsylvania State University, USA

Quantifying and visualizing mitochondrial fission/fusion and the organelle interactome from time-lapse microscopy imaging
Andrew R. Cohen, Drexel University, USA

19h15 End of the first day
20h30 Targeting Mitochondria Dinner at Steigenberger Hotel Berlin
Appointment in the lobby of the hotel. If you would like to participate, please register online or contact the staff on site.

Day 3 – Thursday October 25, 2018

8h55 Opening of the second day

Session 3: Mitochondria & microbiota intertalk
9h00 – 10h15

Microbiota-Mitochondria interactions
Marvin Edeas, Institute Cochin, University Paris Descartes, France

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

10h15 Coffee Break, Networking & Poster Session

Session 4: Strategies to target mitochondrial: clinical trials and potential mitochondria-based therapies
11h00 – 15h30

Therapeutic application of specific near infrared light wavelengths that inhibit cytochrome C oxidase results in robust neuroprotection
Maik Hüttemann, Wayne State University School of Medicine, USA

Mechanism and therapeutic potential of cyclophilin inhibitors for prevention of mitochondrial myopathy progression
Håkan Westerblad, Karolinska Institutet, Sweden

Phase 2 motor study of Omaveloxolone in patients with mitochondrial myopathies
John Vissing, Copenhagen University, Denmark

The legal framework for mitochondrial therapy: identifying and preventing legal pitfalls within the translation from bench to bedside
Timo Faltus, Martin-Luther-Universität Halle-Wittenberg, Germany

Reversing wrinkled skin and lost hair in mice by restoring mitochondrial function
Keshav Singh, University of Alabama at Birmingham, USA

13h00 Lunch Break, Networking & Poster Session

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

The Nicotinamide Riboside Journey from Discovery to Clinical Efficacy
Frank Jaksch, ChromaDex, USA

15h30 Coffee Break & Poster Session
Special workshop: Mitochondria & ageing
15h55 – 17h30

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

17h00 Discussion & concluding remarks

Targeting Mitochondria 2018 Awards

17h30 End of Targeting Mitochondria 2018