WORLD MITOCHONDRIA SOCIETY

9th World Congress on

TARGETING MITOCHONDRIA

Preliminary Program

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 mechanism
- 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

Key dates:
- Thursday, Sept. 27, 2018: Registration
- Monday, Sept. 24, 2018: Short Oral Submission
- Monday, Oct. 1, 2018: Poster Submission

Targeting Mitochondria 2018 Speakers

**Targeting Mitochondria: Welcome note & introduction**
Volkmar Weisig
President of WMS, Midwestern University, USA

**Microbiota-Mitochondria interactions**
Marvin Eedes
Institut Cochin, Université Paris Descartes, France

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

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

**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

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

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

**Foxp3 increases oxidative phosphorylation and Nad oxidation, adapting regulatory T cells to low glucose high lactate environments**
Alessia Angelini
Children’s Hospital of Philadelphia, USA

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

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

**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

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

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

**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

**Metabolic switches saving mitochondria from oxidative stress**
Carsten Culmsee
Universität Marburg, Germany

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

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

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

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

**Healing the heart through mitochondrial dynamics: a love-hate relationship**
Sang-Bing Ong
Duke-NUS Medical School, Singapore
Introduction Note by the President of World Mitochondria Society

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
**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

- FOXP3 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
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

The role of the Pink1/Parkin pathway in neuroblastoma chemo-resistance  
Flavia Radogna, Laboratoire de Biologie Moléculaire et Cellulaire du Cancer, Luxembourg

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 – 10h30

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

Nutritional interventions and dietary supplementation for mitochondrial disease patients  
Marni J. Falk, University of Pennsylvania Perelman School of Medicine, USA

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

13h00 Lunch Break, Networking & Poster Session

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

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

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

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

17h00 Discussion & concluding remarks

Targeting Mitochondria 2018 Awards

17h30 End of Targeting Mitochondria 2018