

9th World Congress on Targeting Mitochondria

World Mitochondria Society



# Targeting Mitochondria 2018

October 23-25, 2018  
Steigenber Hotel Berlin, Germany



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[www.targeting-mitochondria.com](http://www.targeting-mitochondria.com)

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## Congress Tracks:

- Recent advances on mitochondrial dysfunctions and dynamics in chronic diseases: the mechanistic
- 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:

- Mon.** Early Bird Registration  
Sept. 24, 2018
- Wed.** Short Oral Submission  
Sept. 5, 2018
- Thur.** Poster Submission  
Sept. 27, 2018

## Targeting Mitochondria 2018 Speakers



Targeting Mitochondria: Welcome note & introduction

**Volkmar Weissig**  
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

**Maik Hüttemann**  
Wayne State University School of Medicine, USA



The transcriptomic and proteomic landscape of mitochondrial dysfunction in mouse

**Inge Kühl**  
CNRS - I2BC, France



Mechanism and therapeutic potential of cyclophilin inhibitors for prevention of mitochondrial myopathy progression

**Håkan Westerblad**  
Karolinska Institutet, Sweden



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



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 Culmsee**  
Universität Marburg, Germany



Cellomics of mitochondrial morphofunction

**Werner Koopman**  
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 Edeas**  
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

**Madhavika N. Serasinghe**  
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

**Alessia Angelin**  
Children's Hospital of Philadelphia, USA



Mitochondrial potassium channels: new regulation mechanisms?

**Adam Szewczyk**  
Nencki Institute of Experimental Biology, Poland



Phase 2 motor study of Omaveloxolone 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



# World Mitochondria Society

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## 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.

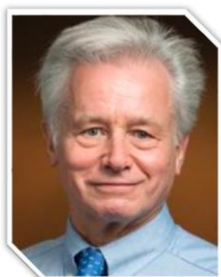
However, this year we will also focus on the cross-talk between mitochondria and microbiota as well as on mitochondrial dynamics in health and disease. Furthermore, we will address nutritional and pharmaceuticals interventions for mitochondrial respiratory deficiencies and we will highlight the role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



# World Mitochondria Society

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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

**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*

13h00 Lunch Break, Networking & Poster Session



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## **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 Kühn, 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- $\alpha$ -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, Germany*

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**

*Csaba Cserep, Hungarian Academy of Sciences, Hungary*



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**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.*





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## 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