WORLD MITOCHONDRIA SOCIETY

Powering the Next Era of Medicine

17TH CONGRESS

Targeting Mitochondria

WMS: Decoding Energy & Designing the Future

Mitochondria at the Crossroads of Medicine, Longevity and Innovation

OCTOBER
21 » 23, 2026

BERLIN
GERMANY

SCIENTIFIC AGENDA

– Day one –

Wednesday, October 21, 2026

Workshop: Evaluating Mitochondrial Function

Methods, Imaging and Emerging Technologies

13h50 - 14:00

Introduction

***Volkmar Weissig**, President of the World Mitochondria Society*

14h00 – 15h30

Mitochondria Function Evaluation: Oxygen Consumption rates, Mitochondrial Membrane Potential, ATP Synthesis.

***Naïg Gueguen**, Mitovasc Institute, Centre Hospitalier Universitaire d'Angers, France*

Current methods and technologies; methodological discrepancies; reproducibility and standardization; data interpretation; practical recommendations.

15h30 - 16h00 Coffee Break & Meet the Speakers

Mitochondrial Innovation Session

16h00 – 16h45 **NanoLive Demonstration**

Live-cell imaging and mitochondrial dynamics
From static snapshots to dynamic intelligence

Label-free live-cell imaging; mitochondrial morphology; network dynamics; cellular stress responses; quantitative image analysis.

16h45 – 17h45 **Innovation Showcase - Call for Emerging Mitochondrial Technologies**

Mitochondrial imaging; functional assays; metabolic analysis; artificial intelligence; diagnostic platforms.

17h45 – 18h30 **Interactive Discussion: Which Technologies Are Ready to Transform Mitochondrial Research and Clinical Practice?**
Chair: Naïg Gueguen

18h30 **End of the Workshop**

– Day Two –

Thursday, October 22, 2026

Mitochondrial Regulation, Resilience and Disease

From Mechanism to Medicine

8h50 - 9h00 **Opening Introduction**

Volkmar Weissig and Marvin Edeas

Two Perspectives on Mitochondrial Medicine

Academic Discovery and Industrial Translation

9h00 – 9h25 - Academic Keynote Perspective

From Mitochondrial Discovery to Approved Therapy:
Lessons for the Future of Medicine
***Hazel Szeto**, Weill Medical College of Cornell University, USA*
Academic discovery, scientific evidence and clinical validation.

9h25 – 9h50 - Industry Keynote Perspective

Building on the Foundation of Four:
Advancing Mitochondrial Targeted Geropeptide Medicine
***Kevin Slawin**, Eos SENOLYTIX, USA*
Innovation, development and therapeutic deployment.

9h50 - 10h05 **Joint Panel Discussion**

Hazel H. Szeto and Kevin Slawin

10h05 – 10h50 Coffee Break, Poster Session & Meet the Sponsors

Session 1 – Mitochondrial Adaptation

Metabolic Signaling, Organelle Crosstalk and Quality Control

10h50 **Who Controls NAD⁺? Mitochondria as Gatekeepers of Cellular Metabolism and Therapeutic Response**
***Mathias Ziegler**, University of Bergen, Norway*

11h20 **Mitochondrial Diversity and Plasticity Across Cells and Tissues: From Functional Specialization to Disease Vulnerability**
***Anna Monzel**, Columbia University Irving Medical Center, USA*

11h50 **The Mitochondria–Lysosome Axis: A New Dimension in Cellular Resilience and Disease**
***Jiajie Diao**, University of Cincinnati College of Medicine, USA*

12h20 **Damage-Sensing in Mitochondrial Disorders: From Mitophagy to the Integrated Stress Response**
***Derek Narendra**, National Institutes of Health, USA*

12h50 – 14h00 Lunch Break and Poster Session

Session 2 – Brain Mitochondria

Resilience, Neurodegeneration and Early Detection

14h00 **Programmable Mitochondria:**
Rewiring Brain Bioenergetics to Restore Cognition.
Étienne Hébert Chatelain, *Université de Moncton, Canada*

14h30 **Mitochondrial Quality Control in Oligodendrocyte Life and Death**
Robert A. Hill, *Dartmouth College, USA*

15h00 - 15h30 **Selected Short Oral Presentations I**

3 presentations x 10 minutes (7-minute presentation + 3-minute discussion).

15h30 – 16h15 Coffee Break, Poster Session & Meet the Sponsors

16h15 **Is Alzheimer's Disease a Mitochondrial Resilience Disorder Before It Becomes a Proteinopathy?**
Benedict Albensi, *Nova Southeastern University, USA*

16h45 **From Energy to Signaling: Tracking Early Mitochondrial Distress with PET to Predict Trajectories from Normal Brain Aging to Neurodegenerative Disease**
Meagan McManus, *University of Arizona College of Medicine, USA*

17h15 - 18h45 **Selected Short Oral Presentations II**

9 presentations x 10 minutes (7-minute presentation + 3-minute discussion).

18h45 **End of Day 2**

– Day Three –

Friday, October 23, 2026

From Mitochondrial Diagnosis to Transfer and Clinical Translation

Pathways to Clinical Translation

Session 3 – Mitochondrial Disease and Precision Diagnosis

9h00 **From Mitochondrial Pathology to Precision Diagnosis: Lessons from the Newcastle Mitochondrial Disease Program**
Robert Taylor, *Newcastle University, UK*

9h30 **Mitochondrial Complexome Profiling: A New Diagnostic and Mechanistic Window into Respiratory Chain Disease.**
Ilka Wittig, *Goethe University, Germany*

10h00 - 10h15 **Selected Short Oral Presentations**

7-minute presentation + 3-minute discussion, followed by transition.

10h15 – 11h00 Coffee Break, Poster Session & Meet the Sponsors

Session 4 – Intercellular Mitochondrial Transfer in Disease and Repair

11h00 **Mitochondrial Transfer from Glial Cells to Neurons Confers Protection Against Peripheral Neuropathy**
Ru-Rong Ji, *Duke University School of Medicine, USA*

11h30 **Intercellular Mitochondrial Transfer in Tauopathies: Mechanisms and Therapeutic Perspectives**
Amandine Grimm, *University of Basel, Swizerland*

12h00 - 12h30 **Selected Short Oral Presentations**

3 presentations x 10 minutes (7-minute presentation + 3-minute discussion).

12h30 – 13h30 Lunch Break and Poster Session

Session 5 – Engineering Mitochondrial Transfer for Therapy

13h30 **Transplantation of Encapsulated Mitochondria Alleviates Dysfunction in Mitochondrial Disease Models**
Xingguo Liu, *Guangzhou Medical University, China*

14h00 **Cell-Type-Targeted Mitochondrial Transfer Therapy**
Botond Roska & Temurkhan Ayupov, *Institute of Molecular and Clinical Ophthalmology IOB, Switzerland*

Outstanding Mitochondrial Innovation Pitch Session

14h30 - 15h30 **Open to academic teams, start-ups and industry**

Selection based on scientific originality, technological innovation, translational potential, and clinical or industrial impact.
Format: 5-minute pitch + 3-minute jury questions.

15h30 – 16h00 Coffee Break, Poster Session & Meet the Sponsors

16h00 - 17h00 **Selected Short Oral Presentations**

6 presentations x 10 minutes (7-minute presentation + 3-minute discussion).

17h00 - 17h15 **Final Key Message - The Next Decade of Mitochondrial Medicine: From Diagnosis to Intervention.**

***Robert Taylor**, Newcastle University, UK*

17h15 - 17h25 **WMS Awards**

17h25 - 17h30 **Official Closing**

Volkmar Weissig and Marvin Edeas

17:30 **End of the Congress**

For more information, please visit: www.wms-site.com.