

World Mitochondria Society

Targeting Mitochondria

16TH
CONGRESS

OCTOBER 22 - 24, 2025 - BERLIN, GERMANY

Agenda





16th World Congress on Targeting Mitochondria

October 22-24, 2025 – Berlin, Germany

Day One: Wednesday, October 22, 2025 – Mitochondria Workshop

12h00 – 13h30 Registration & Material Distribution

All Workshop and Congress attendees are invited to collect their Badges & Materials.
Workshop access is limited to Workshop or Full 3-Day ticket holders only. To participate, please [register here](#).

13h25 Introduction by **Volkmar Weissig**, President of the World Mitochondria Society



13h30 Workshop 1: Mitochondria Function Evaluation: Workshop Highlights, Methods, Discrepancies, and Recommendations

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

15h00 **Live demonstration by Nanolive SA:**

Live, Label-Free Quantification of Mitochondrial Dynamics Using AI-Powered Imaging
Nanolive SA, Switzerland



15h30 Coffee Break



16h00 Workshop 2: Mitochondria Transplantation: From Theoretical to Clinical Applications

Andrés Caicedo, Universidad San Francisco de Quito, Ecuador

17h00 Discussion with Naïg Gueguen, Andrés Caicedo and Nanolive SA

17h30 End of the Workshop

Day Two: Thursday, October 23, 2025

8h00 Materials Distribution & Registrations

8h50 Welcome Note by **Volkmar Weissig**, **Marvin Edeas** - President & Founder of World Mitochondria Society



9h00 Keynote Speech - Mitochondria and the Meaning of Life

Nick Lane, University College of London, United Kingdom

Session 1 – Mitochondrial Dynamics in Health and Diseases: Mechanistic and Perspectives

Chairs: Marvin Edeas, Volkmar Weissig



9h30 Actin Dynamics in Mitochondrial Function: Implications for Cellular Homeostasis and Disease

Marc Germain, Université du Québec, Canada



9h55 Immune Evasion through Tumor-Derived Mitochondrial Transfer (Online)

Yosuke Togashi, Okayama University, Japan



10h20 Nerve-to-Cancer Mitochondrial Transfer: A Key Driver of Metastasis

Simon Grelet, University of South Alabama, USA

10h45 – 11h30 Coffee Break & Poster Session



11h30 Targeting Mitochondrial Pyruvate Carrier: Impact on Future Metabolic Therapies
Edmund Kunji, University of Cambridge, United Kingdom



11h55 Fighting Fire with Fire: Boosting T Cell Therapy by Intercellular Mitochondrial Transfer
Luca Gattinoni, Leibniz Institute for Immunotherapy, Germany

12h20 Quantitative Cellular Characterization of Extracellular Mitochondria Uptake and Delivery
Gregory Lavieu, INSERM, Université Paris Cité, France

12h30 – 14h00 Group Photo, Lunch Break & Poster Session



Chairs: Simon Grelet, Edmund Kunji

14h00 Mitochondrial Protein Synthesis: A Key on Health and Disease / Mitochondria and Disease
Joanna Rorbach, Karolinska Institutet, Sweden



14h25 Mitochondrial Dynamics: Steering the Future of Mitochondrial Remodeling in Health and Disease
Tatjana Kleele, Institute of Biochemistry, ETH Zurich, Switzerland



14h50 How Mitochondria Organize Their Powerhouse Machinery for Optimal Performance
Florent Waltz, University of Basel, Switzerland

15h15 Short Oral Presentations

AI-driven Mitochondria and Organelle Analysis in Label Free Images
Thibault Courtheoux, Nanolive SA, Switzerland

The Mitochondrial DNAJC Co-Chaperone TCAIM Reduces A-Ketoglutarate Dehydrogenase Protein Levels to Regulate Metabolism
Wen Yang, Shanghai Jiaotong University, China

Point of view: Advances in Mitochondria: Insights and Controversies



15h35 Delocalisation of the Macromolecular Devices for Efficient ATP Synthesis in Extra-Mitochondrial Districts
Alessandro M. Morelli, University of Genoa, Italy

16h00 – 16h40 Coffee Break & Poster Session

Chairs: Laurant Chatre, Kosuke Kusamori, Alessandro Prigione

16h40 Short Oral Presentations

Can We Untie the Linkage Between Life Extension and a Decline in Healthspan via Healthy Mitophagy
Einav Gross, Hebrew University of Jerusalem, Israel

Regulation of Respiratory Supercomplexes Through Inhibitory Cytochrome C Oxidase Y304 Phosphorylation Causes Mitochondrial Dysfunction in Diabetic Heart
Tasnim Arroum, Wayne State University, USA

YAP1 Regulates Mitochondrial Homeostasis and Metabolic Reprogramming in Response to Vascular Stiffening in Pulmonary Hypertension Due to Left Heart Disease
Mariya Kucherenko, Universitätsmedizin Berlin, Germany

Time-Restricted Feeding, Whole-Body Mitochondrial Synchronization, and Health Status
Dylan Sarver, University of California Los Angeles, USA

Lysosome-Mitochondria Crosstalk Regulate Cytoplasmic and Intra-Mitochondrial Translation in Neurons
Kalina Katarzyna Wiatr, IRCCS San Raffaele Scientific Institute, Milan, Italy

Sequestration of the Polyunsaturated Fatty Acids Protects the Cells with Oxidative Phosphorylation Deficiency from Ferroptosis
Petr Pecina, Laboratory of Bioenergetics, Institute of Physiology CAS, Czech Republic

Mitochondrial Deficit Induced by Targeting Complex I Gene Ndufs3 Reduces Rab7 Expression and Causes Lysosomal Impairment in Pancreatic Cancer Cells
Giulia Girolimetti, University of Salento, Italy

Hyperfunctional Mitochondria Via Cancer Cell Polyploidisation for Intercellular Transfer
Sai Mun Leong, *National University of Singapore, Singapore*

Actin-Based Tunneling Nanotubes Mediate Mitochondrial Transfer from Cancer Cells to Fibroblasts
Xiaoyu Wu, *Institute of Molecular Health Sciences, Department of Biology, Switzerland*

Aurora A Overexpression Rewires Mitochondrial Metabolism by Reshaping the Complex I Interactome
Claire Caron, *CNRS, Univ Rennes, IGDR, France*

Mechanism of Long-Distance Charge Transport Between Cytochrome C And Complex III In Mitochondria
Pau Gorostiza, *ICREA-IBEC, Spain*

Glucose Transporter 1 (Glut1) Controls the Humoral Immune Response by Regulating Mitochondrial Activity in B Lymphocytes
Katharina Pracht, *University Hospital Erlangen, Germany*

18h40 End of Targeting Mitochondria 2025 Day 2

20h00 Meet the Speakers Dinner (for ticket holders only)

Day Three: Friday, October 24, 2025

8h25 Registration & Welcoming of Attendees



8h30 **Keynote Speech - Targeting Mitochondrial Channels: Update and Strategies**
Adam Szewczyk, *Nencki Institute of Experimental Biology, Poland*

Session 2 – Emerging Trends and Innovations in Mitochondria Research

Chairs: Nick Lane, Tatjana Kleele



9h00 **Brain Organoids for Drug Discovery of Mitochondrial Neurological Disorders**
Alessandro Prigione, *Heinrich Heine University, Germany*



9h25 **Mitochondria and Creatine: Perspectives and Strategies**
David Rizo Roca, *Karolinska Institutet, Sweden*



9h50 **Mitochondrial Cybrids: Advancing Precision Oncology**
Alberto Anel, *University of Zaragoza, Spain*



10h15 **The Role of Mitochondrial-Derived Vesicles in Peroxisome Biogenesis**
Ayumu Sugiura, *Juntendo University, Japan*

10h40 – 11h25 Coffee Break & Poster Session

Session 3 – Mitochondria Medicine: Strategies to Target Mitochondria, Clinical Trials and Potential Mitochondria-Based Therapies

Chairs: Alberto Anel, Adam Szewczyk



11h25 **Drug Development for the Therapy of Mitochondrial Diseases**
Volkmar Weissig, *Midwestern University, College of Pharmacy Glendale, USA*



11h50 **Development of Mitochondria-Based Therapeutic Strategies for Disease Treatment**
Kosuke Kusamori, *Tokyo University of Science, Japan*

12h15 Short Oral Presentations & Innovations

Mitochondrial Transplantation as a Precision Strategy for Radiobiological Sensitization in Metabolically Stratified Glioblastoma
Christopher Cifarelli, West Virginia University, USA

Restoring Mitochondrial Quantity and Quality to Reverse Warburg Effect and Drive Tumor Differentiation
Jiangbin Ye, Stanford University, USA

Mitochondrial Transplantation as a Novel Therapeutic Strategy for Anthracycline-Induced Cardiotoxicity
Sofia Trigo Anca, Centro Nacional de Investigaciones Cardiovasculares, Spain

12h45 – 14h00 Lunch Break & Poster Session

Chairs: Joanna Rorbach, Florent Waltz



14h00 **Mitochondrial Transplantation: From Skeletal Muscle Atrophy to Human Clinical Advances and Perspectives**
Gökhan Burçin Kubat, Baskent University, Turkey



14h25 **Engineering Mitochondria to Treat Organ Injury Diseases**
Xing Zhou, Kunming Medical University, China

14h50 Short Oral Presentations

A Bifunctional Mitochondria-Targeted Peptide (SPN-15) Accelerates Diabetic Wound Healing
Hazel Szeto, Social Profit Network, Menlo Park, CA, USA

From Bench to Patient: Mitochondrial Augmentation Technology as a New Treatment Option for MDS
Tina Napso, Minovia Therapeutics, Israel

Advanced Strategies for Correcting Mitochondrial Mutations in Human Disease Models
Martijn Koppens, UMC Utrecht, Netherlands

MNRR1-Derived Peptides, a Promising Therapeutic Target for Mitochondrial Dysfunction Syndromes
Lawrence Grossman, Wayne State University, USA

Impact of Incretin-Based Preconception Care Interventions on Oocyte Mitochondrial Activity and Ultrastructure in Maternal Obesity
Lien Loier, Gamete Research Centre, University of Antwerp, Belgium

Targeting Müller Cell Mitochondrial Metabolism for Gene Therapy in Diabetic Retinopathy
Sweetu Susan Sunny, Biomedical Center, Ludwig-Maximilians-Universität, München, Germany

The Iberius: A New Technology for Measuring Mitochondrial Bioenergetics in Living Cells and Mitochondria
Roger James Springett, CellSpex Ltd, United Kingdom

Targeting Mitochondrial Protein Quality Machinery with Veratridine, A Natural Plant-Based Molecule:
A Novel Approach for Colon Cancer Therapy
Khosrow Rezvani, University of South Dakota, USA

MSC Mitochondrial Transplantation in a Diabetic Retinopathy Model in The Presence of SGLT2 Inhibitor
Yahya Kiransoy, Institute of Health Sciences, Kocaeli University, Türkiye

A RNAi-Based Approach to Selectively Downregulate Mitochondrial Ion Channels in Poor Prognosis Cancers
Valentina Brillo, Department of Biology, University of Padova, Italy

Synergistic Inhibition of Melanogenesis by A Novel Botanical Blend via Activation of Mitochondrial Nicotinamide Nucleotide Transhydrogenase
Lieve Declercq, Proya Cosmetics Co., Ltd, China

Beyond Canonical – A Parasite's Take on Mitochondria
Irina Bregy, Radboud University, Netherlands

Targeting Mitochondrial Bioenergetics to Sustain Neurodevelopment Under Thyroid Hormone Deficiency
Emanuela Bottani, University of Verona, Italy

17h00 Targeting Mitochondria 2025 Concluding Remarks & Awards by **Marvin Edeas, Volkmar Weissig**

17h10 Coffee & Drinks with Networking Accompanied by Drinks and Appetizers

17h30 End of World Mitochondria Society's Annual Meeting