



SUMMER SCHOOL

MITOCHONDRIA IN HEALTH AND DISEASE



09-11 June 2026



Palazzo Garzolini -
Di Toppo Wassermann

Tuesday, June 9th, 2026

14:30 - 14:45

Opening remarks

15:00 - 18:00

MITOCHONDRIAL BIOENERGETICS: FROM THE BASICS TO CUTTING-EDGE RESEARCH

Energy conservation in bioenergetics systems. A historical perspective

Prof. Paolo Bernardi (University of Padova, Italy)

Revisiting the mitochondrial Permeability Transition: recent progress and perspectives

Dr. Michela Carraro (University of Padova, Italy)

Respiratory oxidases, at the boundary between chemical simplicity and biological complexity

Dr. Alessandro Giuffrè (Institute of Molecular Biology and Pathology, CNR, Rome, Italy)

Wednesday, June 10th, 2026

9:00-12:00

MITOCHONDRIAL PROTEINS: A STRUCTURAL PERSPECTIVE

The ATPase Inhibitor IF1 - clamp or regulator?

Prof. David Harris (University of Oxford, UK)

The mitochondrial Carnitine carrier as a redox sensor: Structure/function relationships and post translational modifications

Prof. Cesare Indiveri (University of Calabria, Italy)

Structural studies on mitochondrial complexes and supercomplexes

Prof. Leonid Sazanov (Institute of Science and Technology Austria, Austria)

14:30-17:30

MITOCHONDRIAL DYSFUNCTION IN NEURODEGENERATION

Mitochondrial quality control in neurodegenerative diseases, and molecular mechanisms of protection

Prof. Elena Ziviani (University of Padova, Italy)

Mitochondrial iron-sulfur cluster biogenesis and human disease, with a focus on two neurodegenerative diseases

Prof. Paola Costantini (University of Padova, Italy)

Brain Organoids to Model Molecular Mechanisms of Mitochondrial Brain Disorders and Neurodegeneration

Dr. Agnieszka Rybak-Wolf (Max-Delbrück-Centrum für Molekulare Medizin, Germany)

Thursday, June 11th, 2026

9:00-13:00

MITOCHONDRIAL DYSFUNCTION IN CANCER

Keeping the bad guys in good shape: mitochondrial chaperones and cancer cells

Prof. Andrea Rasola (University of Padova, Italy)

Computational studies of the mitochondrial chaperone TRAP1 with an eye to drug design

Prof. Giorgio Colombo (University of Pavia, Italy)

Targeting Mitochondrial Complex I in Cancer: Uncovering Adaptive Responses and Therapeutic Vulnerabilities

Prof. Anna Maria Porcelli (University of Bologna, Italy)

From mitochondrial ion channels to targeted cancer therapy in preclinical models of pancreatic cancer

Prof. Ildiko Szabò (University of Padova, Italy)

Event dedicated to **PhD students** of the Department of Medicine and to **students in Medicine and Surgery** and **Biotechnology**. **BSC AND MSC STUDENTS WILL BE GRANTED 2 CFU.**



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