



Symposium 2018
“Mitochondria and cell metabolism”

Symposium “Mitochondria and cell metabolism”

Date: October 31st and November 1st, 2018

Location: Anfiteatro Farabeuf, Facultad de Medicina, Universidad de la República

Organized by the Center for Free Radical and Biomedical Research (CEINBIO)

Wednesday, October 31st

Morning session: Mitochondria and cell metabolism

Chairs: Drs. Laura Castro and Madia Trujillo

- | | |
|--------------|---|
| 8:50-9:00 | Opening remarks |
| 9:00-9:40 | “Mitochondria and Fat” Dr. Orian Shirihai (David Geffen School of Medicine at UCLA, USA) |
| 9:40-10:00 | “Mitofusin dependent mitochondrial fusion maintains the SASP in therapy-induced senescence” Lic. Jennyfer Martínez (Facultad de Medicina, Universidad de la República, Uruguay) |
| 10:00-10:30 | Coffee break |
| 10:30- 10:50 | “New insights on SIRT1 regulation by DBC1 and its effects on metabolism” Mag. Leonardo Santos (Laboratorio de Metabolismo y Envejecimiento, Institut Pasteur de Montevideo, Uruguay) |
| 10:50-11:10 | “Impaired hepatic mitochondrial function during early lactation in pasture-fed dairy cows: a role for protein lysine acetylation” Mag. Mercedes García-Roche (Facultad de Agronomía, Universidad de la República, Uruguay) |

11:10- 11:50 **“When a vampire gets sick and old: immune activation and aging regulate energy metabolism in the major arbovirus vector *Aedes aegypti*”** Dr. Marcus F. Oliveira (Instituto de Bioquímica Médica Leopoldo de Meis, Universidade Federal do Rio de Janeiro, Brazil)

12:00-14:30 Lunch

Afternoon session: Mitochondrial oxidants and antioxidants

Chairs: Drs. Leonor Thomson and Valeria Valez

14:30-15:10 **“Superoxide radical reaction with nitric oxide and the fate of peroxynitrite in mitochondria”** Dr. Rafael Radi (Facultad de Medicina, Universidad de la República, Uruguay)

15:10-15:40 **“Application of Resonance Raman spectroscopy for the direct detection of manganese porphyrins and their redox state in mitochondria”** Dr. Sebastian Carballal (Facultad de Medicina, Universidad de la República, Uruguay)

15:40-16:10 **“Mitochondrial redox imbalance in hypercholesterolemia and in nicotinamide nucleotide transhydrogenase (NNT) deficiency: relevance for atherosclerosis”** Dra. Helena Oliveira (Instituto de Biologia, Universidade Estadual de Campinas, Brazil)

16:00- 16:30 Coffee Break

16:30-16:50 **“Role of the mitochondrial and cytosolic Fe-superoxide dismutases in *Trypanosoma cruzi* virulence”** B.C. Alejandra Martínez (Facultad de Medicina, Universidad de la República, Uruguay)

16:50-17:30 **"Forty years investigating mitochondrial functions"** Dr. Anibal Vercesi (Faculdade de Ciências Médicas, Universidade Estadual de Campinas, Brazil)

Thursday, November 1st

Morning session: Structural and functional aspects of mitochondrial proteins and lipids

Chairs: Drs. Andres Troschansky and José Souza

- 9:00-9:40 **“Relationship between cardiolipin content and mitochondrial plasticity”**
Dr. Luis Alberto Luévano-Martínez (Instituto de Química, Universidade de São Paulo, Brazil)
- 9:40-10:00 **“The hypoxic mitochondria: the strange case of worms”** Mag. Cecilia Martínez (Laboratorio de Biología de Gusanos. Facultad de Química, Universidad de la República-Institut Pasteur de Montevideo, Uruguay)
- 10:00-10:30 Coffee break
- 10:30- 10:50 **“Nuclear translocation and alternative conformation of cytochrome c after peroxynitrite-mediated challenge”** Lic. Florencia Tomasina (Facultad de Medicina, Universidad de la República, Uruguay)
- 10:50-11:10 **“Biochemical and structural characterization of human aconitase, a key mitochondrial oxidant target”** Lic. Santiago Mansilla (Facultad de Medicina, Universidad de la República, Uruguay)
- 11:10-11:30 **“Relationship between sperm calcium and mitochondrial function”** Lic. Mariana Ford Parodi (Facultad de Medicina, Universidad de la República, Uruguay)
- 11:30-12:10 **“The discovery of novel proteins involved in the axis Mitochondrial Dynamics-Mitophagy”** Dr. Alvaro A. Elorza (Faculty of Biological Sciences and Faculty of Medicine, Center for Biomedical Research, Universidad Andres Bello, Chile)
- 12:00-14:30 Lunch

Afternoon session: Role of mitochondria in human pathology

Chairs: Drs. Adriana Cassina and Celia Quijano

- 14:30-15:10 **“The Mighty Mitochondria: A Hub of Signaling in the Vasculature”** Dr. Sruti Shiva (Vascular Medicine Institute and Department of Pharmacology and Chemical Biology, University of Pittsburgh, USA)
- 15:10-15:50 **“Mitochondria-targeted nanoparticles for the treatment of resistant melanoma cells”** Dr. Hebe Durán (Comisión Nacional de Energía Atómica and Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina)
- 15:50-16:10 **"Diagnosis of mitochondrial diseases using NGS technologies"** Dr. Lucía Spangenberg (Unidad de Bioinformática, Institut Pasteur de Montevideo, Uruguay).
- 16:10-16:40 Coffee break
- 16:40 -17:10 **“Mitochondrial dysfunction and metabolic reprogramming of astrocytes in neurodegeneration”** Dr. Patricia Cassina (Facultad de Medicina, Universidad de la República, Uruguay)
- 17:10-17:50 **“Mitochondrial activity and substrate utilization in cell fate and function”** Dr. Toren Finkel (Aging Institute, University of Pittsburgh and University of Pittsburgh Medical Center, USA)
- 18:00-18:10 Closure