

Course in Mitochondrial Metabolism and Cancer November 3- 6 2010

EuroMediterranean University Center, Ronzano, Bologna (Italy)

Organizer : *European Genetics Foundation*

Directors : *G. Romeo (Bologna, Italy), G. Lenaz (Bologna, Italy), M. Rugolo (Bologna, Italy)*

Faculty: L. Alberghina (Milan, Italy), M. Attimonelli (Bari, Italy), M. Corral-Debrinski (Paris, France), J. Cuezva (Madrid, Spain), M.F. Di Renzo (Torino, Italy), A.J. Enriquez (Zaragoza, Spain), M. N. Gadaleta (Bari, Italy), G. Gasparre (Bologna, Italy), C. Giorgi (Ferrara, Italy), E. Gottlieb (Glasgow, UK), G. Lenaz (Bologna, Italy), M. Giorgio (Milan, Italy), G. Romeo (Bologna, Italy), R. Rossignol (Bordeaux, France), M. Rugolo (Bologna, Italy), H. Simonnet (Lyon, France), K. Singh (Buffalo, USA).

Wednesday, November 3rd

Morning Session: *Bioenergetics and metabolism of cancer cells*

- 08:30 **Course Registration**
09:00 **J. Cuezva** The Bioenergetics signature of Cancer
09:45 **R. Rossignol** From bioenergetics to the metabolic regulation of carcinogenesis
10:30 **Coffee break**
11:00 **E. Gottlieb** Mitochondrial tumor suppressors: A genetic and biochemical link between metabolism and cancer
11:45 **H. Simonnet** Energy metabolism in proliferation and high nutrient demand
12:30 **Poster Viewing**
13:00 **Lunch break**

Afternoon Session

- 14:30 **Concurrent Workshops**
15:30 **Coffee break**
16:00 **Concurrent Workshops**

Thursday, November 4th

Morning Session: *Impact of mitochondria and mitochondrial genes dysfunction on cancer cells*

- 09:00 **E. Gottlieb** Metabolic sensors in cancer: from oxygen to amino acid sensing
09:45 **G. Gasparre** mtDNA mutations in the metabolic adaptation of cancer cells: learning from oncocytic tumors
10:30 **Coffee break**
11:00 **A. J. Enriquez** Respiratory chain defects and cancer development
11:45 **K. Singh** Epigenetic and Genetic Changes Induced by Mitochondrial Dysfunction and its role Tumorigenesis
12:30 **Poster Viewing**
13:00 **Lunch break**

Afternoon Session

- 14:30 **Concurrent Workshops**
15:30 **Coffee break**
16:00 **Concurrent Workshops**

Friday, November 5th –

Morning Session: *Mitochondria-related molecular pathways in cancer*

- 09:00 **M. Giorgio** Mechanism of mitochondrial ROS production, signalling for cell death and proliferation, side effects associated to mutagenesis and transformation

09:45 **M.F. Di Renzo** Cells lacking fumarase are protected from apoptosis through a HIF independent, AMPK dependent mechanism
10:30 **Coffee break**
11:00 **C. Giorgi** ER-mitochondria crosstalk in the control of cell fate
11:45 **L. Alberghina** Ras and mitochondria in cancer cells
12:30 **Poster Viewing**
13:00 **Lunch break**

Afternoon Session

14:30 **Concurrent Workshops**
15:30 **Coffee break**
16:00 **Concurrent Workshops**
17:00 Best Posters Ceremony

Saturday, November 6th

Morning Session: *Mitochondria-related aspects of cancer research*

09:00 **M.N. Gadaleta** Damage to mitochondrial DNA in aging and age-related diseases
09:45 **M. Corral-Debrinski:** Inducing heteroplasmy of mtDNA mutations to generate experimental models of mitochondrial diseases. Cellular adaptations to OXPHOS defects in cancer
10:30 **Coffee break**
11:00 **M. Attimonelli** Bioinformatic approaches to study mtDNA variability in cancer
11:45 **Course Director** Conclusions
12:30 **Lunch Break**
13:00 Departure