

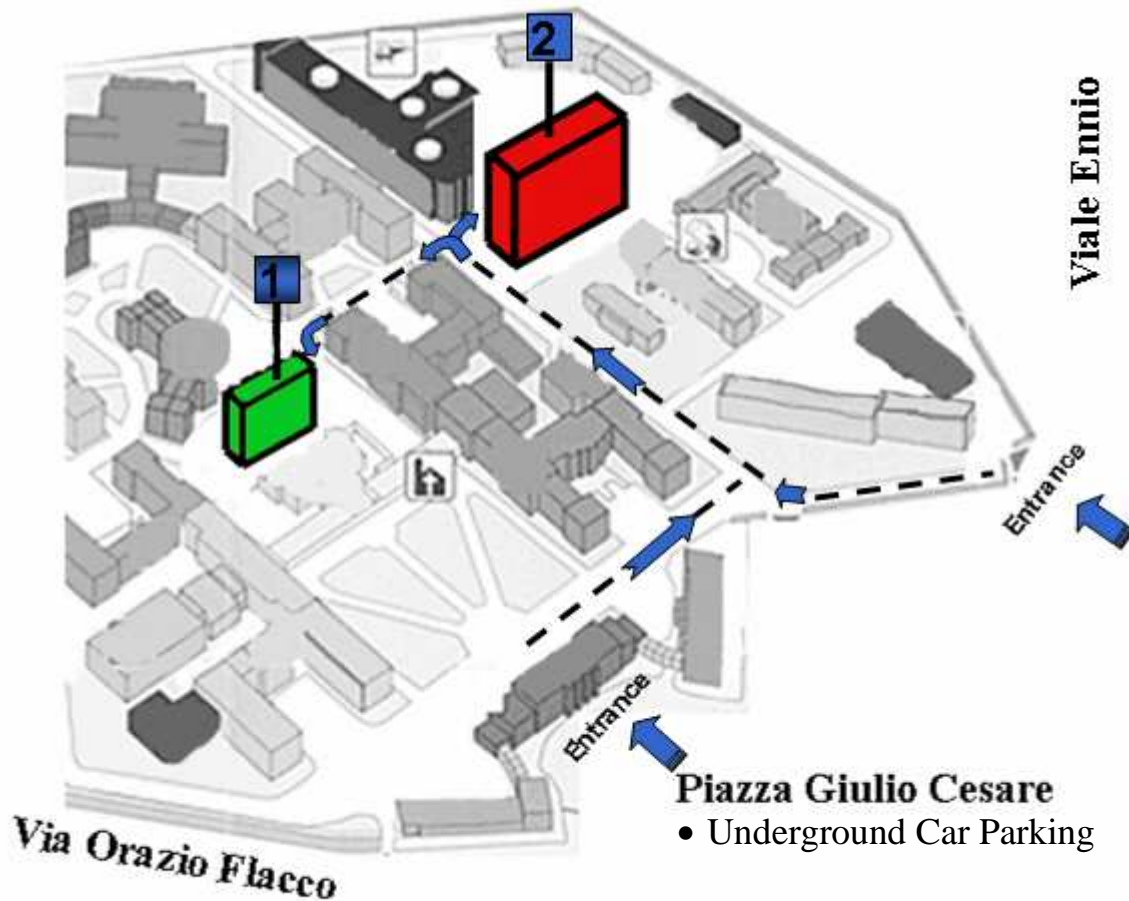
Bari International Symposium on
"Mitochondrial Physiology and Pathology"
22-26 June 2008
IUBMB S1/2008
Bari-Italy

Program

Notes

- L** Lectures
SC Submitted Contributions (Posters and ES contributions)

University Hospital (Policlinico)



Polifunzionale (1)

- Lectures (*Aula Magna*)
- Posters Sessions (*ground floor, first floor*)

New Complex Biomedical Sciences (2)

- Registration Center (*ground floor*)
- Computer Room (*ground floor*)
- Evening Sessions (*Room A, B and C, ground floor*)
- Dining Rooms (*ground floor, first floor*)

Sponsored by

International Union of Biochemistry and Molecular Biology (IUBMB)
Italian Society of Biochemistry and Molecular Biology (SIB)
Life Sciences Department of the National Research Council (CNR)
Institute of Biomembranes and Bioenergetics of the National Research Council
University of Bari
Regione Puglia
Provincia di Bari
Comune di Bari

Organized by

Department of Medical Biochemistry, Biology and Physics, University of Bari

Organizing and Scientific Committee

Palmiro Cantatore
Nazzareno Capitanio
Tiziana Cocco
Maria Nicola Gadaleta
Michele Lorusso
Ferdinando Palmieri
Sergio Papa (Chairman)

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Secretariat

Lucia Cavone
Department of Medical Biochemistry, Biology and Physics,
University of Bari
P.zza Giulio Cesare, 11 - 70124 BARI
Tel. 080/5448541 - Fax 080/5448538
E-mail: papabchm@cimedoc.uniba.it

PROGRAM

Sunday, June 22

15:00 – 17:30

REGISTRATION

(NEW COMPLEX OF BIOMEDICAL SCIENCES)

OPENING SESSION

(AULA MAGNA)

Chairmen: *Angelo Azzi (Bern), Sergio Papa (Bari)*

18:00 – 18:15

Sergio Papa Conference Introduction

18:15 – 18:30

Angelo Azzi Address from the President of the IUBMB

18:30 – 19:30

Ernesto Quagliariello Memorial Lecture

Mitochondrial Ca²⁺ homeostasis in cell life and death

Rosario Rizzuto (Padua)

20:00

WELCOME RECEPTION

(NEW COMPLEX OF BIOMEDICAL SCIENCES)

PROGRAM

Monday, June 23

L1 – FUNCTIONAL MITOCHONDRIAL GENOMICS I (AULA MAGNA)

Chairman: *Nils-Göran Larsson (Stockholm)*

9:00 – 9:05 Chairman introduction

9:05 – 9:30 **Mitochondrial DNA replication and disease**
Sherine S. L. Chan (The Triangle-North Carolina)

9:35 – 10:00 **Physiological and biochemical defects in active site and deletion mutants of the mitochondrial replicative DNA helicase**
Laurie S. Kaguni (East Lansing)

10:05 - 10:30 **Human mitochondrial RNA polymerase primes lagging-strand DNA synthesis *in vitro***
Claes M. Gustafsson (Göteborg)

10:35 - 11:00 **Structural and functional characterization of mTERF-family proteins in animal mitochondria**
Palmiro Cantatore (Bari)

11:00 – 11:30 **Coffee Break**

Chairman: *Walter Neupert (Munich)*

11:30 – 11:35 Chairman introduction

11:35 – 12:00 **Mitochondrial DNA replication is not necessary for worm development**
Aleksandra Trifunovic (Stockholm)

12:05 – 12:30 **Functional genomics of mitochondria**
Holger Prokisch (Munich)

12:35 – 13:00 **Mitochondrial DNA haplogroups in evolutionary and disease studies**
Antonio Torroni (Pavia)

13:05 – 13:30 **Simplicity and complexity: mitochondrial genome diversity in Metazoa**
Graziano Pesole (Bari)

13:30 – 14:30 **Lunch**

14:30 – 16:30 **Poster presentation**

PROGRAM

Monday, June 23

L1 – FUNCTIONAL MITOCHONDRIAL GENOMICS II (AULA MAGNA)

Chairman: *Laurie S. Kaguni (East Lansing)*

16:00 – 16:05 Chairman introduction

16:05 – 16:30 **Biogenesis of mitochondria: function and dysfunction**
Walter Neupert (Munich)

16:35 – 17:00 **Molecular biology of mitochondrial cation transporters**
Rudolf J. Schweyen (Vienna)

17:05 – 17:30 **The chaperones of F₁-ATPase**
Domenico Gatti (Chicago)

17:35 – 18:00 **The antigenomic approach to developing therapies for mtDNA disorders**
Dimitri S. Kyriakouli (Newcastle)

18:05 – 18:30 **Accumulation of aberrant alternative transcripts in pathological mutations of the NDUF54 gene of complex I**
Damiano Panelli (Bari)

18:35 – 19:00 **The RHNuMtS compilation: features and bioinformatics approaches to locate and quantify human NuMtS**
Marcella Attimonelli (Bari)

EVENING SESSIONS

(NEW COMPLEX OF BIOMEDICAL SCIENCES)
(SC parallel sessions)

ROOM A

20:30 – 22:30

Functional mitochondrial genomics

Chairman: *Palmiro Cantatore (Bari)*

E. Barrey; P. Martinsson; A. Pyle; J. Rorbach; Yu Xinhua

ROOM B

20:30 – 22:30

Mitochondrial dynamics and physiology I

Chairman: *Antonio Torroni (Pavia)*

M. Campanella; S. Cogliati; L. De Bari; V. De Pinto; E. Franzolin; R. Furushima-Shimogawara; R. Gallerani; O. Guilleri; M. Hermann; A. Klepko;

ROOM C

20:30 – 22:30

Mitochondrial dynamics and physiology II

Chairman: *Claes M. Gustafsson (Göteborg)*

W. A. Kuvichkin; G. La Piana; L. Leanza; E. Lenaers; A. Messina; S. Reina; F. Scandurra; A. Schmidt; A. Toye; F. Vogtle

*Evening sessions will be held in Rooms A, B, C of New Complex of Biomedical Sciences.
Each contribution is scheduled for 15 minutes including discussion.*

PROGRAM

Tuesday, June 24

L2 - MITOCHONDRIAL DYNAMICS AND PHYSIOLOGY I (AULA MAGNA)

Chairman: *Nazzareno Capitanio (Foggia)*

9:00 – 9:05 Chairman introduction

9:05 – 9:30 **On the phylogenetic origin of mitochondrial fusion factors**
Manuel Rojo (Bordeaux)

9:35 – 10:00 **Proteolytic control of mitochondrial membrane dynamics**
Thomas Langer (Cologne)

10:05 - 10:30 **Calcium signalling and ER-mitochondrial dynamics**
Gyorgy Hajnoczky (Philadelphia)

10:35 - 11:00 **Novel channels of the inner mitochondrial membrane**
Mario Zoratti (Padua)

11:00 – 11:30 **Coffee Break**

Chairman: *Maurizio Brunori (Rome)*

11:30 – 11:35 Chairman introduction

11:35 – 12:00 **Nuclear transcription factors in mitochondria and possible functions**
Costas Sekeris (Athens)

12:05 – 12:30 **Mitochondria as ATP consumers: the cell biology of the endogenous inhibitory protein, IF-1**
Michael R. Duchen (London)

12:35 – 13:00 **Mitochondrial biogenesis during dendritic cell differentiation**
Annalisa Del Prete (Bari)

13:30 – 14:30 **Lunch**

14:30 – 16:00 **Poster presentation**

PROGRAM

Tuesday, June 24

L2 - MITOCHONDRIAL DYNAMICS AND PHYSIOLOGY II (AULA MAGNA)

Chairman: *Frédéric Bouillaud (Paris)*

16:00 – 16:05 Chairman introduction

16:05 – 16:30 **Nitric oxide and the respiratory enzyme**
Maurizio Brunori (Rome)

16:35 – 17:00 **Calcium signalling, reactive oxygen species and mitochondria dysfunction: a plausible pathogenic hypothesis for native LDL-related disease**
Nazzareno Capitanio (Foggia)

17:05 – 17:30 **A novel adenine nucleotide transporter in plant mitochondria**
Luigi Palmieri (Bari)

17:35 – 18:00 **High definition LC/MS profiling of mitochondrial proteins from *Saccharomyces cerevisiae* strains**
Mark Andrew McDowall (Manchester)

18:05 – 18:30 **Mitochondrial FAD synthesis, flavinylation and regulation of flavoprotein level**
Maria Barile (Bari)

18:35 – 19:00 **Dephosphorylation by calcineurin regulates translocation of Drp1 to mitochondria**
Luca Scorrano (Geneva)

21:00 **Social Dinner**

Ballroom Hotel Sheraton Nicolaus

PROGRAM

Wednesday, June 25

L3 – REACTIVE OXYGEN SPECIES AND AGING (AULA MAGNA)

Chairman: *Rosario Rizzuto (Padua)*

- 9:00 – 9:05** Chairman introduction
- 9:05 – 9:30** **Differential effects of mitochondrial complex I inhibitors on production of reactive oxygen species**
Giorgio Lenaz (Bologna)
- 9:35 – 10:00** **UCP2 glutamine and glucose**
Frédéric Bouillaud (Paris)
- 10:05 - 10:30** **Coenzyme Q₁₀ deficiency in humans**
Gian Paolo Littarru (Ancona)
- 10:35-11:00** **HCV infection and cell bioenergetic alterations: multiple players involved**
Claudia Piccoli (Foggia)
- 11:00 – 11:30** **Coffee Break**

Chairman: *Giorgio Lenaz (Bologna)*

- 11:30 – 11:35** Chairman introduction
- 11:35 – 12:00** **Mitochondria-targeted plastoquinone derivatives as inhibitors of execution of aging program**
Vladimir Skulachev (Moscow)
- 12:05 – 12:30** **Mitochondrial proteome in adult and old rat liver**
Maria Nicola Gadaleta (Bari)
- 12:35 – 13:00** **Oxidative stress and mitochondrial dysfunction in aging: critical role of cardiolipin**
Giuseppe Paradies (Bari)
- 13:05 – 13:30** **Cellular stress response in aging and neurodegenerative disorders: a redox proteomics approach**
Vittorio Calabrese (Catania)
- 13:30 – 14:30** **Lunch**
- 14:30 – 16:00** **Poster presentation**

PROGRAM

Wednesday, June 25

L4 - APOPTOSIS (AULA MAGNA)

Chairman: *Vladimir Skulachev (Moscow)*

- 16:00 – 16:05** Chairman introduction
- 16:05 – 16:35** **A systems biology approach to mitochondrial cell death pathways**
Guido Kroemer (Villejuif)
- 16:35 – 17:00** **From apoptosis to necrosis in Yeast**
Frank Madeo (Graz)
- 17:05 – 17:30** **Antiapoptotic role of the mitochondrial chaperone TRAP-1/HSP-75**
Franca Esposito (Naples)
- 17:35 – 18:00** **MTCH2/MIMP: a novel regulator of tBID-induced MOMP**
Atan Gross (Rehovot)
- 18:05 – 18:30** **Mitochondria in cerebellar granule cells en route to apoptosis**
Ersilia Marra (Bari)
- 18:35 – 19:00** **Drug-induced sensitization of tumor cells to trail via amplification of intrinsic and extrinsic death pathways: role of ROS-dependent MAPK activation**
Shazib Pervaiz (Singapore)
- 19:05 – 19:30** **The N-terminal domain of VDAC1 essential for mitochondria-mediated apoptosis and regulation**
Varda Shoshan-Barmatz (Beer-Sheva)

EVENING SESSIONS

(NEW COMPLEX OF BIOMEDICAL SCIENCES)
(SC parallel sessions)

ROOM A

20:30 – 22:30

Reactive oxygen species and aging

Chairman: *Maria Nicola Gadaleta (Bari)*

M. Alexeyev; F. Cerqueira; F. Guarino; H. Massoud;
M. Lebedzinska; M. Nabben; G. Serviddio; M. Vrbacky

ROOM B

20:30 – 22:30

Apoptosis

Chairman: *Michele Lorusso (Bari)*

E. Barbieri; V. Spina-Purrello; Y. Suzuki; T. Wei

ROOM C

20:30 – 22:30

Mitochondrial medicine

Chairman: *Vladimir Skulachev (Moscow)*

L. Siculella; D. Andersson; P. Martinelli; K. Nowicovsky; F. Pallotti; A. Santoro;

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PROGRAM

Thursday, June 26

L5 – MITOCHONDRIAL MEDICINE I: MITOCHONDRIAL HEREDITARY DISORDERS

(AULA MAGNA)

Chairman: *Julio Montoya (Zaragoza)*

- 9:00 – 9:05** Chairman introduction
- 9:05 – 9:30** **Mitochondrial optic neuropathies: two genomes kill the same cell type**
Valerio Carelli (Bologna)
- 9:35 – 10:00** **Pathogenetic mechanisms of hereditary dysfunction of complex I of the respiratory chain in human neurological disorders**
Sergio Papa (Bari)
- 10:05 - 10:30** **Nuclear genetic defects of mitochondrial ATP synthase**
Josef Houšťek (Prague)
- 10:35 - 11:00** **AOX allotopic expression: a new tool for investigating and counterbalancing respiratory chain defects in human cells**
Pierre Rustin (Paris)
- 11:00 – 11:30** **Coffee Break**

Chairman: *Josef Houšťek (Prague)*

- 11:30 – 11:35** Chairman introduction
- 11:35 – 12:00** **Strong purifying selection in transmission of mammalian mitochondrial DNA**
Nils-Göran Larsson (Stockholm)
- 12:05 – 12:30** **A new pathologic mitochondrial DNA mutation in the cytochrome oxidase subunit I**
Julio Montoya (Zaragoza)
- 12:35 – 13:00** **Mitochondrial transporters in health and disease**
Ferdinando Palmieri (Bari)
- 13:05 – 13:30** **Characterization of the Ethe1 protein by cellular and animal models: towards an understanding of its role in ethylmalonic encephalopathy**
Valeria Tiranti (Milan)
- 13:30 – 14:30** **Lunch**
- 14:30 – 16:00** **Poster presentation**

PROGRAM

Thursday, June 26

L5 – MITOCHONDRIAL MEDICINE II: MITOCHONDRIAL DYSFUNCTION IN CHRONIC DISEASE

(AULA MAGNA)

Chairman: *Luca Scorrano (Geneva)*

- 16:00 – 16:05** Chairman introduction
- 16:05 – 16:30** **Mitochondrial pathogenesis of muscular dystrophies: new therapeutical perspectives**
Paolo Bernardi (Padua)
- 16:35 – 17:00** **Mitochondrial dysfunction and the pathogenesis of chronic diabetic complications**
Michael Brownlee (New York)
- 17:05 – 17:30** **Mitochondrial dysfunction in cancer: causes, consequences and therapeutic implications**
Peng Huang (Houston)
- 17:35 – 18:00** **Mitochondrial dysfunction triggered by loss of HtrA2 results in the activation of a brain-specific transcriptional stress response**
Nicoleta Moiso (Leicester)
- 18:05 – 18:30** **Aminoglycosides and ototoxicity: structural analyses of interactions with the eukaryotic A site identify the mitoribosome as drug target**
Eric C. Böttger (Zurich)