

LIFE SCIENCE 2017



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14th

15th Febr. 2017

-3'

14th February

Aula F, Campus Aquae, Pavia



8.45-9.00 Greeting from the Rector of the University of Pavia

Genetic variability in basic and clinical science

Chairperson Prof. Albertini A

- 9.00-9.15 Frataxin: not any longer a function orphan protein (Pastore A, DMM)
- 9.15-9.30 The diffusion and evolution of multidrug-resistant *Klebsiella pneumoniae* characterized by genomic epidemiology (Sassera D, DBB)
- 9.30-9.45 Transcriptional and epigenetic alterations in a chronic DNA damage cell system (Bione S, IGM-CNR)
- 9.45-10.00 The Group B *Streptococcus*-secreted protein CIP interacts with C4, preventing C3b deposition via the lectin and classical complement pathways (Giussani S, DMM)
- 10.00-10.15 A genome-wide portrait of Italy (Raveane A, DBB)
- 10.15-10.30 Unraveling the genetic history of human populations: new insights on South America peopling (Grugni V, DBB)

- coffee break -

In vitro and in vivo models: dissecting disease mechanisms and developing novel therapeutic approaches

Chairperson Prof. Albertini A

- 11.00-11.15 FoxO-dependent atrogenes vary among catabolic conditions and play a key role in muscle atrophy induced by hindlimb suspension (Brocca L, DMM)
- 11.15-11.30 Structural biology: dissecting cellular processes at molecular level (Binda C, DBB)
- 11.30-11.45 Innovative strategies for shaping a neuroprotective CNS microenvironment in amyotrophic lateral sclerosis (ALS) (Peviani M, DBB)
- 11.45-12.00 Role of the RNA binding protein TDP43 in the DNA damage response (Brandi O, IGM-CNR)
- 12.00-12.15 Nova2-mediated alternative splicing of L1cam in tumor vasculature (Belloni E, IGM-CNR)
- 12.15-12.30 Autophagy and celiac disease: a new way to "digest" gluten (Comincini S, DBB)

- lunch time -

In vitro and in vivo models: dissecting disease mechanisms and developing novel therapeutic approaches

Chairperson Prof. Riva S

- 14.00-14.15 Neuroinflammatory responses in rat choclear nuclei after peripheral damage and their role in tinnitus onset (Pizzala R, DMM)
- 14.15-14.30 Identification of novel druggable sites in key players of oxidative stress (Magnani F, DBB)
- 14.30-14.45 Host-pathogen interaction mediated by Influenza viral proteins (Bavagnoli L, IGM-CNR)
- 14.45-15.00 Development of "resistance resistant" antitubercular drugs by multitargeting strategy (Chiarelli L, DBB)
- 15.00-15.15 Novel insights into the contribution of platelet-derived microparticles to cancer metastasis (Guidetti G, DBB)
- 15.15-15.30 Blood platelets as a link between vascular inflammation and Alzheimer's disease (Canobbio I, DBB)

- coffee break -

In vitro and in vivo models: dissecting disease mechanisms and developing novel therapeutic approaches

Chairperson Prof. Riva S

- 16.00-16.15 Mitochondrial dysfunction is a newly-described consequence of diastolic calcium leakage caused by RyR2 gain-of-function mutations (Mazzanti A, DMM)
- 16.15-16.30 Identification and characterization of Drosha recruitment at DNA double strand breaks (Cabrini M, IGM-CNR)
- 16.30-16.45 New approaches to fight *Burkholderia cenocepacia*, a very dangerous Cystic Fibrosis pathogen (Burone S, DBB)
- 16.45-17.00 Remodeling of the Ca²⁺ toolkit in tumors: focus on patients-derived endothelial progenitor cells and cancer cells (Moccia F, DBB)
- 17.00-17.15 ¹H-NMR to evaluate the metabolome of BronchoAlveolar Lavage fluid (BALf) in Bronchiolitis Obliterans Syndrome (BOS): towards the development of a new approach for biomarker identification (Fumagalli M, DBB)
- 17.15-17.30 Unraveling the key elements of the male ejaculate for fertility: the case of tsetse fly (Scolari F, DBB)



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9.00-9.45

Invited lecture: Building molecular tools out of DNA

Björn Högberg, Dept Medical Biochemistry and Biophysics Karolinska Institutet, Sweden

In vitro and in vivo models: dissecting disease mechanisms and developing novel therapeutic approaches

Chairperson Prof. Gherardi E

- 9.45-10.00 iPS cells technology and CRISPR/Cas9 system to model chromosomal diseases (Barillà C, DMM)
- 10.00-10.15 Impaired DNA damage response to oxidative stress in Rubinstein-Taybi syndrome cells (Prosperi E, IGM-CNR)
- 10.15-10.30 Mechanisms that rescue replication forks arrested by transcription (Brambati A, IGM-CNR)

- 10.30-10.45 Genome editing: A novel technology for multiple applications (Martinez F, Euroclone)

- coffee break -

In vitro and in vivo models: dissecting disease mechanisms and developing novel therapeutic approaches

Chairperson Prof. Gherardi E

- 11.15-11.30 AL amyloidosis - deciphering pathology and therapy in new in vivo model systems (Nuvolone M, DMM)
- 11.30-11.45 In vivo models of chondrodysplasias caused by defects in proteoglycan biosynthesis: phenotyping and pharmacological approaches (Rossi A, DMM)
- 11.45-12.00 Cellular EDA fibronectin isoform sustains megakaryocyte proliferation and inflammation during bone marrow fibrosis progression (Malara A, DMM)
- 12.00-12.15 Nanotechnology applications for innovative therapeutic approaches (Visai L, DMM)
- 12.15-12.30 A physiological approach to characterize the content and the antioxidant activity of grapefruit polyphenols (Molino S, DBB)

- lunch time -

At the edge between fundamental research and biotechnological applications

Chairperson Prof. Biamonti G

- 14.00-14.15 CodY-mediated regulation of four B. subtilis extracellular protease genes (Barbieri G, DBB)
- 14.15-14.30 The Natural Polymer γ -PGA and its hydrolases (Calvio C, DBB)
- 14.30-14.45 Tyrosyl-DNA phosphodiesterases and DNA damage response in plants (Balestrazzi A, DBB)
- 14.45-15.00 Extraction and quantification of nutraceutical and cosmeceutical compounds from wastes of fruit and vegetable products (I-II-III-IV GAMMA) (Buonocore D, DBB)

Genotype and phenotype from the bench to bedside

Chairperson Prof. Biamonti G

- 15.00-15.15 New genes associated with non-photosensitive trichothiodystrophy (Botta E, IGM-CNR)
- 15.15-15.30 New signaling pathways altered in Cockayne syndrome (Lanzafame M, IGM-CNR)

- coffee break -

Genotype and phenotype from the bench to bedside

Chairperson Prof. Biamonti G

- 16.00-16.15 Clinical, molecular and functional research on cerebellar and brainstem congenital defects (Valente EM, DMM)
- 16.15-16.30 The epigenetic landscape of mammalian chromosomes: centromeres and telomeres (Giulotto E, DBB)
- 16.30-16.45 Transthyretin related amyloidosis: toward a proper therapy based on the right target (Verona G, DMM)
- 16.45-17.00 Somatic spliceosome mutation, aberrant splicing, and defective mRNA production in myelodysplasia (Cazzola M, DMM)
- 17.00-17.15 Genetic predisposition to gastrointestinal tumors (Marabelli M, DBB)
- 17.15-17.30 Germ and somatic pluripotent stem cell models of differentiation (Garagna, DBB)

17.30-18.00 **Concluding remarks of the Symposium. Chairpersons Prof. Albertini, Biamonti, Gherardi**



Fondazione Adriano
Buzzati-Traverso



ATGC-5'