



19-21 Febbraio 2020

# 3° Joint Symposium

## LIFE SCIENCE 2020

Aula F-Campus Aquae (Via Cascinazza – Pavia)



# UNIVERSITÀ DI PAVIA



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CliniSciences

# 3<sup>rd</sup> Joint Symposium

February 19<sup>th</sup>

14:00-14:15 *Greetings from the Rector of Pavia University*

## *Modelling Diseases and Therapies*

(Chairperson Prof. Gherardi E.)

- 14:15-15:15 **Invited speaker:** Decoding non-coding RNA function (Bozzoni I, Sapienza University, Rome)
- 15:15-15:30 Understanding and tackling neurodegeneration in Amyotrophic Lateral Sclerosis (ALS) through single-cell RNAseq and novel pharmacological and gene-delivery platforms (Peviani M, DBB)
- 15:30-15:45 The role of the double-stranded RNA-dependent protein kinase PKR in Bone Sarcomas (Piazzini M, IGM-CNR)

15:45-16:25 *Coffee break*

- 16:25-16:40 Effects of interleukin 6 inhibition in progeroid cells (Scheda E, IGM-CNR)
- 16:40-16:55 ERK signalling as a potential target for neurodevelopmental disorders (Brambilla R, DBB)
- 16:55-17:10 Aminoacyl-tRNA synthetase mutations in trichothiodystrophy (Botta E, IGM-CNR)
- 17:10-17:25 Induced pluripotent stem cells to model rare cardiovascular diseases and to discover novel personalized therapies (Mura M, Bastaroli F, DMM)
- 17:25-17:40 Characterization of LQT8 pig model and design of targeted gene therapy (Fasciano S, DMM)
- 17:40-17:55 Role of Pin1 in adult skeletal muscle: a promising target in slowing down the ageing process (Rossi M, DMM)

February 20<sup>th</sup>

## *Computational Biology*

(Chairperson Prof. Forlino A.)

- 09:00-09:15 Programmed cell death ligand-1 expression in small bowel adenocarcinoma (Arpa G, DMM)
- 09:15-09:30 Russian doll symbiosis: evolutionary and functional investigation of the intramitochondrial symbiont of ticks (Floriano AM, DBB)
- 09:30-09:45 Computational approaches for NGS data analysis (Alfieri R, IGM-CNR)
- 09:45-10:00 The hereditary gastric cancer in the NGS era (Ranzani GN, DBB)
- 10:00-10:20 Congenital brain malformations: novel phenotypes, novel genes, and novel pathogenetic mechanisms (Serpieri V, DMM)
- 10:20-10:35 The 100K Asian genome study, population mechanics and implications in disease (Jansen S; talk sponsored by MACROGEN)

10:35-11:15 *Coffee break*

- 11:15-11:30 Reconstruction of enhancer-target gene regulatory network integrating 3D chromatin architecture (Salviato E, IGM-CNR)
- 11:30-11:45 Reconstructing the phylogenies of the barn swallow and the lesser kestrel using mitogenomes (Lombardo G, DBB)
- 11:45-12:00 Unexpected features of GC-AG introns in long non-coding and protein-coding genes suggest a new role as regulatory elements (Abou Alezz M, IGM-CNR)

## ***Genome Integrity***

**(Chairperson Prof. Biggiogera M.)**

- 12:00-12:15 Dynamics and evolution of mammalian centromeres (Cappelletti E, DBB)
- 12:15-12:30 Mechanisms that modulate replication fork stability and R-loop accumulation during the conflict with transcription (Zardoni L, IGM-CNR)
- 12:30-14:00      *Lunch***
- 14:00-14:15 Antiviral potential coupled to genome stability: the multifaceted roles of the human RNA helicase DDX3X protein (Riva V, IGM-CNR)
- 14:15-14:30 Seed quality examined through the lens of genome integrity (Balestrazzi A, DBB)
- 14:30-14:45 UBR5 interacts with the replication fork and protects DNA replication from DNA polymerase  $\eta$  toxicity (Sabbioneda S, IGM-CNR)
- 14:45-15:00 Double and triple hit primary cutaneous diffuse large B-cell lymphomas: cytogenetical characterization of a possible aggressive subtype (Bonometti A, DMM)
- 15:00-15:15 ALS-linked mutation in FUS protein negatively impact on proper DNA damage response activation leading to damage accumulation (Farina S, IGM-CNR)
- 15:15-15:30 Exploring protein stability and quality with NanoDSF (Viganò F, NANOTEMPER; talk sponsored by ALFATECH)

**15:30-16:10      *Coffee break***

## ***Seeing is believing***

- 16:10-16:25 Unexpected findings in clarified brains: what is the choroid plexus attached to? (Pizzala R, DMM)
- 16:25-16:40 Three-dimensional computed tomography of the mouse ovary (Fiorentino G, DBB)
- 16:40-16:55 Polymodal modulation of TREK-1 K<sub>2</sub>P channel: towards a specific pharmacology (Lolicato M, DMM)
- 16:55-17:10 The nucleolus epigenetics in a photograph (Zannino L, DBB)
- 17:10-17:25 Studying the role of p21 and PCNA acetylation in Nucleotide Excision Repair (NER) (Ticli G, IGM-CNR)
- 17:25-17:45 Piecing together a molecular puzzle (Canciani A, DBB)

**February 21<sup>st</sup>**

**Cell homeostasis**

**(Chairperson Prof. Maga G.)**

- 09:00-09:15 New insights in megakaryopoiesis and thrombopoiesis: the self-produced collagen route (Abbonante V, DMM)
- 09:15-09:30 The Nova2/Ptbp2 circuit integrates alternative splicing decision during angiogenesis (Di Matteo A, IGM-CNR)
- 09:30-09:45 Aquaporins in human sperm: relevance in oxidative stress control and in fertility (Pellavio G, DMM)
- 09:45-10:00 Role of proline-rich tyrosine kinase Pyk2 in neutrophils (Canino J, DBB)
- 10:00-10:15 A stem cell-based model of adipogenesis to study cell-autonomous browning in response to environmental and dietary factors (Sottile V, DMM)
- 10:15-10:35 The role of ionic channels in the homeostasis and therapy of the cerebrovascular system (Negri S, Ratto D, Talpo F, DBB)
- 10:35-11:15 Coffee break**
- 11:15-11:30 Spatiotemporal coordination of nuclear cAMP signals via EPAC1 (Iannucci LF, DMM)
- 11:30-11:45 *Staphylococcus aureus* iron-regulated surface determinant B (IsdB) promotes adherence to human von Willebrand factor: implications for endothelial colonization (Alfeo MJ, DMM)

**Challenges for the Future**

- 11:45-12:00 Archaeology of stress-resistance genes for improving crop photosynthetic efficiency (Pinnola A, DBB)
- 12:00-12:15 How gold nanoparticles physical features influence interaction with tumour targeting molecules and cancer responses (Bloise N, DMM)
- 12:15-12:30 New weapons against old and emerging bacterial pathogens (Degiacomi G, DBB)
- 12:30-12:45 Immune-tolerance to human IPS-derived neural progenitors xenografted into the developing cerebellum of rodents is overridden by species-specific differences in neuronal maturation timing (Magrassi L, IGM-CNR)
- 12:45-13:05 Genetic and evolutionary approaches to study the biology of invasive insects and their impact on human health and agriculture (Ometto L, DBB)