

Annual Meeting of Young Researchers in Physiology Firenze May 28-30, 2014

SHORT PROGRAMME

Wednesday May 28

12.00-14.00 Registration of the participants

14.30-15.00 Opening ceremony

15.00-16.00 **Keynote Lecture I: “Impact of Hypertrophic Cardiomyopathy-associated mutations on sarcomere mechanics and energetics “ (Corrado Poggesi)**

16.00-16.30 Coffee break

16.30-19.00 **Oral communications: *Neurophysiology I***

Thursday May 29

09.00-11.00 **Oral communications: Muscle *Physiology I***

11.00-11.30 Coffee break

11.30-13.00 **“L’identità della fisiologia, dai “fisiologi”presocratici al Settore Scientifico Disciplinare BIO/09” (Carlo Reggiani)**

13.00-14.00 Lunch

14.00-15.00 **Oral communications: Muscle *Physiology II***

15.15-17.15 **Oral communications: *Neurophysiology II***

17.15-17.45 Coffee break

17.45-19.00 **Keynote Lecture II: “Molecular mechanisms of brain homeostatic control by astroglia” (Stefano Ferroni)**

Friday May 30

09.00-11.00: **Oral communications: *Cell physiology and cardiac muscle***

11.00-11.30 Coffee break

11.30-12.30 **Round Table: “The future in research: grant and jobs opportunities for young investigators”(Elisabetta Cerbai, Marco Sansò)**

13.00-14.00 Lunch

14.30-17.00 **Oral communications: *Cell Physiology II***

17.00-17.30 Coffee break

17.30-18.30 **Keynote Lecture III: "Human motor control" (Francesco Lacquaniti)**

19.45 **Social Dinner & Award Ceremony**

21.30 **Concert “Musicanti di Brema”**

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14.30-15.00 Opening ceremony

15.00-16.00 **Keynote Lecture I: “Impact of Hypertrophic Cardiomyopathy-associated mutations on sarcomere mechanics and energetics” Corrado Poggesi, University of Firenze**

16.00-16.30 Coffee break

16.30-19.00 **Oral communications: *Neurophysiology I***

Pia Rossi (University of Genova) PRRT2 is a novel presynaptic protein involved in the pathogenesis of paroxysmal neurological disorders.

Enrico Castroflorio (University of Genova) Dissecting the roles of PRRT2 in presynaptic physiology

Davide Aprile (University of Genova) TBC1D24 regulates cortical neuron migration and maturation by modulation of the ARF6-dependent pathway.

Darin Zerti (University of L'Aquila) Neurodegeneration and neuroprotection in abcr α - mice: a model of Stragardt disease

Stefano Zucca (IIT, Genova) Inhibitory control of spontaneous cortical activity

Elenia Cinelli (University of Firenze) Modulation of the lamprey respiratory activity through inhibition of glutamatergic neurons projecting to the respiratory rhythm generator

Massimo Trusel (IIT, Genova) Cell-type specific modulation of the endocannabinoid and ERK cascades rescues striatal circuit dysfunctions and improves motor deficits in parkinsonian mice.

Federico Pecoraro Bisogni (IIT, Genova) REST/NRSF mediated presynaptic homeostasis induced by chronic hyper-activity in excitatory hippocampal neurons

Chiara Criscuolo (CNR PISA) BDNF prevents amyloid-dependent synaptic dysfunction in the entorhinal cortex

Giampaolo Miliore (University of Rome "La Sapienza") Role of environmental conditions in the antidepressant efficacy

Free Dinner

Thursday May 29

09.00-11.00 **Oral communications: Muscle Physiology I**

Leonardo Nogara (University of Padova) Study of the super relaxed state of myosin using paramagnetic and fluorescent probes in skeletal muscle fibers

Valentina Percario (University of Firenze) An investigation on the nature of non-linear elasticity of the muscle sarcomere

Pasquale Bianco (University of Firenze) Large-scale molten-globule dynamics contribute to titin shortening

Giulia Falorsi (University of Firenze) Toward the realization of a sarcomere-like machine

Beatrice Scellini (University of Firenze) Mutations in the central part of α Tropomyosin molecule alter Ca^{2+} sensitivity and tension relaxation of skeletal muscle myofibrils after Troponin-Tropomyosin removal and reconstitution

Eleonora Bardi (University of Pavia) Adaptive response of soleus muscle after crush denervation and during re-innervation: preliminary results

Manuela Marabita (University of Padova) S6K is required for Akt-induced increase in muscle function, but not in muscle growth

Antonio Michelucci (University of Chieti) Lethal exertional strokes in RYR1Y522S/WT and CASQ1-null mice are prevented by drugs used to treat malignant hyperthermia in humans

11.00-11.30 Coffee break

11.30-13.00 **"L'identità della fisiologia, dai "fisiologi"presocratici al Settore Scientifico Disciplinare BIO/09" Carlo Reggiani, University of Padova**

13.00-14.00 Lunch

14.00-15.00 **Oral communications: Muscle Physiology II**

Espedita Muscariello (University of Napoli "Federico II") Changes in physical strength and performance in sarcopenic old obese subjects mans

Nazzareno Fagoni (University of Brescia) The $Q'-V'O_2$ diagram: an analytical interpretation of oxygen transport in arterial blood during exercise in humans

Giusy Caprara (University of Chieti) The absence of GAP-43 causes a delayed ultrastructural maturation in skeletal muscle fibers and an abnormal intracellular calcium modulation in myotubes

Paola Capitanio (University of Padova) Altered Ca²⁺ handling in murine models of malignant hyperthermia and central core disease

15.15-17.15 **Oral communications: Neurophysiology II**

Caterina Rizzi (SNS, Pisa) Nerve Growth Factor regulates the physiology of microglia cells: potential relevance for Alzheimer's disease

Isabella Russo (University of Padova) LRRK2 kinase activity modulates neuroinflammation in microglia cells

Nicola Maria Carucci (SNS, Pisa) Nerve Growth Factor regulates astrocyte physiology in vitro and in vivo

Mattia Di Paolo (University of L'Aquila) Protection and/or substitution of visual function in rat model of retinal degeneration

Elisa Cerri (CNR Pisa) BDNF topical eye treatment rescues visual function in a mouse model of glaucoma

Giulia Campostrini (University of Milano) A MiRP1 mutation found in patient with generalized epilepsy may alter membrane excitability by decreasing HCN channel expression

Roberta Filograna (University of Padova) Novel use of a superoxide radical dismutating agent as a therapeutic approach to hamper the progression of neurodegenerative disorders

Nicola Forte (IIT, Genova) Cellular mechanisms of the antiepileptic activity of the ketogenic diet

17.15-17.45 Coffee break

17.45-18.45 **Keynote Lecture II: "Molecular mechanisms of brain homeostatic control by astroglia"** Stefano Ferroni, University of Bologna.

Free Dinner

Friday May 30

09.00-11.00: **Oral communications: *Cell physiology and cardiac muscle***

Stefania Ribulla (Università Piemonte Orientale) Resveratrol induces intracellular Ca²⁺ rise in mesothelioma cells

Michael Di Palma (University of Urbino) The G protein-coupled receptor heterodimer network (GPCR-HetNet) and its hub components

Ester Sara Di Filippo (University of Chieti) Epigenetic signature in human myogenic progenitors during aging

Laura Civiero (University of Padova) A functional interplay between Leucine rich repeat kinase 2 and p21 activated kinase 6 in neuronal systems.

Manuel Paina (University of Milano) Assessment of the functional relevance of the I_f current in AVN cells using a cardiac-specific and inducible HCN4 KO mouse model

Francesca Gentile (University of Firenze) Steady state and short-term interval force relationships in ventricular trabeculae from failing spontaneously hypertensive (SHR) rats: role of late Na current inhibition.

Claudia Crocini (LENS University of Firenze) T-tubular electrical abnormalities impair local Ca^{2+} release in heart failure.

Benedetta Tosi (University of Firenze) Impact of E163R cTnT mutation on cardiac mechanics and energetics in a murine model

11.00-11.30 Coffee break

11.30-12.30 **Round Table: “The future in research: grant and jobs opportunities for young investigators”**(**Elisabetta Cerbai**, Prorettore alla Ricerca, University of Firenze; **Marco Sansò** Direttore della Ricerca e Sviluppo, Farmigea Holding, Pisa)

13.00-14.00 Lunch

14.30-17.00 **Oral communications: Cell Physiology II**

Francesca Uberti (University Piemonte Orientale) Vitamin D protects human endothelial cells from oxidative stress through the autophagic and survival pathways

Roberto Ripa (SNS, Pisa) Potential regulatory role of mir-29 family in iron homeostasis during aging.

Elena Signoretto (University of Milano) Functional characterization of iron transporter from *Dictyostelium discoideum* as a model of cellular iron homeostasis

Stefania Moretti (University of Milano) Signalling pathways responsible for the regulation of the glutamate transporter 1 (GLT1/EAAT2) in pancreatic beta cells

Simona Latronico (University of Salento) Dose-Dependent Cytotoxic Effects of Flame Retardant Tris(1,3-dichloro-2-propyl) phosphate on HeLa Cell Lines

Rachele Garella (University of Firenze) Site dependent effects of relaxin on the gastrointestinal tract from mice

Rita Vitale (University of Bari) Detection of cardiolipin abnormalities in dominant optic atrophy

Valentina Carlini (University of Milano) CLIC1 as possible blood biomarker for early diagnosis of Alzheimer's disease

Sheila María Álvarez Fernández (University San raffaele Milano): Serological immune response against ADAM10 in colorectal cancer patients and its role in tumor progression

Roberto Angelini (University of Bari) MALDI-TOF-MS lipid fingerprint of leukocytes as a tool for the screening of Barth syndrome

17.00-17.30 Coffee break

17.30-18.30 **Keynote Lecture III: "Controllo motorio nell'uomo- Human motor control"**
Francesco Lacquaniti, Università degli Studi di ROMA "Tor Vergata"

19.45 **Social Dinner & Award Ceremony**

21.30 Concert "Musicanti di Brema"