FIRST MULTIDISCIPLINAR CONFERENCE OF THE ITALIAN RESEARCHERS IN CZECH REPUBLIC

18/6/2019 17.00-20.00

Opening ceremony with the participation of H.E. Francesco Saverio Nisio, Ambassador of Italy and Authorities

Introduction to the Conference by Dr. Luca Vannucci, President of the Czech Immunological Society, scientific organizer

Concert of Johanna Hanikova, pianist (Scarlatti, Chopin, Liszt)

Welcome cocktail

SCIENTIFIC PROGRAM

19/6/2019

Section 1: Bio-medicine, physiology and biotechnologies

Chair: Luca Vannucci, Giancarlo Forte

Part 1 - 9.00-10.40

Luca Vannucci. *Morphology and immunity in transforming tissues: looking for the tumor niche.* Laboratory of immunotherapy, Institute of Microbiology CAS, v.v.i., Prague.

Giancarlo Forte. *International Clinical Research Center: a science excellence center and an incubator for international talents.* Center for Translational Medicine (CTM) International Clinical Research Center (ICRC), St. Anne's University Hospital.

Guido Caluori. *Basic to clinical cardiological research in FNUSA-ICRC electrophysiological center* Interventional Cardiac Electrophysiology, FNUSA-ICRC, Brno and Nanobiotechnology, CEITEC-MU, Brno.

Alice Abbondanza. *Understanding the role of nicotinic cholinergic receptors in striatal-based behaviour* Department of Neurochemistry, Institute of Physiology, Czech Academy of Sciences, Prague.

Anna Malandra. *Effect of Bordetella pertussis virulence factors increasing cAMP levels on mucin production in human airways.* Institute of Microbiology of the CAS, v.v.i., Prague.

Question time: 10.40-10.55

Coffee break 10.55-11.10

Part 2 - 11.10-11.50

Vincenzo Tarallo. *Evolved Methionine Sulfoxide Reductase A for Biotechnological Applications.* Department of Organic Chemistry, Faculty of Science, Charles University.

Paolo Tenti. *Lysyl Oxidases and formation of the early Tumoral Niche*. Laboratory of immunotherapy, Institute of Microbiology of the CAS, v.v.i., Czech Republic and Faculty of Science, Charles University, Prague.

Question time: 11.50 – 11.55

Part 3 – 11.55- 12.50

Section 2: Physics, chemistry and engineering

Chair: Benjamin Irving

Mini-session: Computational Materials Science

Benjamin Irving, Antonio Cammarata, Paolo Nicolini (55 min)

Advanced Materials Group, Department of Control Engineering, Faculty of Electronic Engineering, Czech Technical University in Prague, Prague.

a) Overview of the mini-session (B. Irving)

b) Nanoscale friction properties of ordered and disordered molybdenum disulfide (P. Nicolini)

c) Tailoring friction and energy dissipation at nanoscale (A. Cammarata)

d) Nanoscale properties of TMDs: an in-silico study (B. Irving)

Lunch 12.50 – 14.00

Part 4 - 14.00-15.20

Chair: Alessandra Picchiotti, Gabriele Maria Grittani

Francesco Piana. *Polymers and composite materials for flexible electronics*. Ústav makromolekulární chemie AV ČR, v. v. i. - Oddělení polymerů pro elektroniku a fotoniku Prague.

Lorenzo Giuffrida. *Brilliant and energetic alpha-particle source based on proton-boron nuclear fusion.* Institute of Physics ASCR, v.v.i (FZU), ELI-Beamlines project, Prague.

Daniele Margarone. *Laser-driven Ion Acceleration and Societal Applications at the Extreme Light Infrastructure (ELI).* Institute of Physics ASCR, v.v.i (FZU), ELI-Beamlines project.

Gabriele Maria Grittani. *Radiotherapy with high energy electrons generated by high power lasers: a potential new technology to treat cancer*. Institute of Physics ASCR, v.v.i (FZU), ELI-Beamlines project.

Question time: 15.20-15.30

Coffee break 15.30-15.40

Part 5 - 15.40-16.40

POSTER SESSION

1) Role of APP axonal transport in Alzheimer's disease and Chronic Traumatic Encephalopaty. *Valentina Lacovich, PhD*, FNUSA-ICRC, *Victorio Martin Pozo Devoto, PhD*, FNUSA-ICRC, *Maria Novaková*, PhD, FNUSA-ICRC, *Kateřina Texlová, Bc*, FNUSA-ICRC, *Monica Feole, MS*, FNUSA-ICRC, *Gorazd Bernard Stokin, MD, PhD*, FNUSA-ICRC

2) In vitro model of cardiac fibrotic process to unveil the mechanisms of cardiac cells crosstalk. *Pamela Mozetic, Ana Rubina Perestrelo, Jorge Oliver-De La Cruz and Giancarlo Forte.* International Clinical Research Center (FNUSA-ICRC), St. Anne's University Hospital, Brno; Competence Center for Mechanobiology in Regenerative Medicine, Brno.

3) hnRNPC: a linker between ECM mechanics and mRNA homeostasis in cardiac diseases. *Fabiana Martino, Ana Rubina Perestreli, Stefania Pagliari, Jan Vrbský, Vladimír Vinarský, Jorge Oliver De La Cruz, Francesca Cavalieri, Giancarlo Forte,;* Center for Translational Medicine (CTM), International Clinical Research Center (ICRC), St. Anne´s University Hospital; Faculty of Medicine, Masaryk University; Competence Center for Mechanobiology in Regenerative Medicine, Brno; University of Melbourne; Institute of Dentistry, University of Turku.

4) Identifying regulators of axonal transport. *Monica Feole; Victorio M. Pozo Devoto; Mária Čarná; Valentina Lacovich; andGorazd B. Stokin*. Translational Neuroscience and Aging program (TAP), Center for Translational Medicine (CTM), International Clinical Research Center (ICRC), St. Anne's University Hospital.

5) The role of PV+ GABAergic interneurons in the medial prefrontal cortex on a rat model of psychosis-related cognitive inflexibility as revealed by optogenetic stimulations. *E. Patrono1, K. Hruzova1, J. Svoboda1, A. Stuchlík1*. 1Institute of Physiology - Academy of Sciences Czech Republic, Neurophysiology of Memory.

6) Molecular principles of Cajal body formation. *Davide Alessandro Basello[1,2], Michaela Efenberková, Radek Macháň, Nicola Maghelli, David Stanek*. Institute of Molecular Genetics, Czech Academy of Sciences, Prague, Charles University in Prague, Faculty of Science, Prague; Max Planck Institute of Molecular Cell Biology and Genetics, Dresden.

7) NFAT as a novel pathway in mesenchymal stem cell response to inflammation. *Tidu F., Jose S. S.,De Zuani, M., Bendíčková K., Pompeiano A., Bělašková S., Frič J.* St. Anne's University Hospital Brno International Clinical Research Center, Department of Biology, Faculty of Medicine, Masaryk University.

8) Understanding nanoparticles-cells' interactions through mechanobiology. *Marco Cassani, Jorge Oliver-De La cruz, Soraia Fernandes, Giancarlo Forte*. Center for Translational Medicine (CTM) International Clinical Research Center (FNUSA-ICRC) St. Anne's University Hospital.

9) Femtosecond Stimulated Raman Spectroscopy. *Alessandra Picchiotti*, ELI-beamlines/ELIBIO - Institute of Physics ASCR, v.v.i (FZU), ELI-Beamlines project, Prague.

10) Pulse Radiolysis. *Martin Precek*, ELI-beamlines/ELIBIO - Institute of Physics ASCR, v.v.i (FZU), ELI-Beamlines project.

12) Ultrafast dynamics of plasmon and magnetic resonances in nanoparticles. *Carlo Maria Lazzarini, Tadzio Levato, Jamie M. Fitzgerald, José A. Sánchez-Gil, Vincenzo Giannini*. Institute of Physics of the ASCR, ELI Beamlines Project.

13) In vitro and in vivo evaluation of ferric-based and gadolinium-based nanoparticles in theranostic perspective. *Lenka Rajsiglova*. Laboratory of immunotherapy, Institute of Microbiology of the CAS, v.v.i., Faculty of Science, Charles University.

14) Immunity and remodelling of human colon mucosa in colorectal cancer. *Pavol Lukac*. Laboratory of immunotherapy, Institute of Microbiology of the CAS, v.v.i. ; Faculty of Science, Charles University.

15) Mechanism underlying axonal swelling formation. *Victorio M Pozo Devoto, Valentina Lacovich, Maria Carna, Monica Feole, Katerina Texlova & Gorazd B Stokin.* Translational Neuroscience and Aging Program (TAP), Center for Translational Medicine (CTM), International Clinical Research Center (ICRC), St. Anne's University Hospital.

16) Mechanical thrombectomy results variability per occluded artery in ischaemic stroke *Luca Mengozzi*. 3rd Medical Faculty, Charles University.

17) Test of genetic code evolution hypotheses: Reverse evolution of specific target proteins by mRNA-display technique. *Valerio Guido Giacobelli, Kosuke Fujishima, Vyacheslav Tretyachenko, Klara Hlouchova*; Department of Cell Biology, Faculty of Science, Charles University, Earth-Life Science Institute, Tokyo Institute of Technology.

18) Glutamate receptors as therapeutic targets for glioblastoma multiforme (GBN). *Daniela Arduini*. Delegazione Nazionale Biotecnologi ONB, Rome.

19) mGlu3 metabotropic glutamate receptors as candidate targets for neuroprotective drugs in the MTPT mouse model of Parkinsonism. *Marika Alborghetti*. Delegazione Nazionale Biotecnologi ONB, Rome.

20/6/2019

Part 1 - 9.00-10.10

Section 2: Physics, chemistry and engineering (continuation)

Chair: Daniele Margarone, Antonio Cammarata

Roberto Versaci. *Radiation transport Monte Carlo simulations at ELI Beamlines*. Institute of Physics ASCR, v.v.i (FZU), ELI-Beamlines project, Prague.

Alessandra Picchiotti, Jakob Andreasson. *Bio and material applications at ELI-beamlines.* Institute of Physics ASCR, v.v.i (FZU), ELI-Beamlines project, Prague.

Federico Brivio. *Computational approach to materials modelling*. Charles University.

Question time: 10.00-10.10

Coffee break 10.10-10.20

Section 3: Humanities, economics, social sciences, archaeology

Chair: Luca Vannucci

10.20-11.15

Dino Numerato. *Corruption and Public Secrecy: An ethnography of football match-fixing*. Faculty of Social Sciences, Charles University.

Massimiliano Nuzzolo. *Archaeological works in Egypt: the latest results of the Italian-Czech expedition at the solar temples.* Czech Institute of Egyptology, Charles University.

Question time: 11.00-11.15

11.15-11.30 Conclusions and farewell ceremony with Authorities