



## Poster Presentations May 15<sup>th</sup>

### 1<sup>st</sup> session

- Maria Rosa Loffredo (Sapienza University of Rome, Dept of Biochemical Sciences) Biophysical and antimicrobial investigations of D-PMAP23 affinity to bacterial membranes
- Martina Nicoletti (Campus Biomedico University of Rome) Hodgkin-Huxley models of *C. elegans* neurons: from ion currents to complex neuronal dynamics
- Francesca Sciolla (CNR-ISC and Sapienza University of Rome, Dept of Physics) Interaction of Isoniazid with unilamellar liposomes
- Letizia Chiodo (Campus Biomedico University of Rome, Dept of Engineering) Human  $\alpha 7$  nicotinic receptor in active and inactive conformations: a molecular dynamics
- Fabio Mangini (Fondazione Santa Lucia) Effects of Spinal Cord vascular geometry on the BOLD-fMRI contrast
- Anna Prioriello (University of Rome Tor Vergata, NAST Center) Carbon nanotube/polymer based stretchable electronic devices and their in-vivo application

### 2<sup>nd</sup> session

- **Alice Battistella** (CNR-IOM) AFM Investigation of the Mechanical Properties of Mouse Oocytes
- **Giorgio Gosti** (IIT, Center for Life Nanoscience) Phase Transitions in the Self-Organization of Neural Rosettes
- **Marco Lazzarino** (CNR-IOM) Microfabricated cantilevers for parallelized cell-cell adhesion measurement
- Federico Giove (Fondazione Santa Lucia IRCCS) Development of a Pipeline for the Analysis of Human Spinal Cord fMRI Data Series
- Laura Andolfi (CNR-IOM) An evaluation of the application of the aperture scanning near-field optical microscopy for ultra-structures analysis of anomalous human spermatozoa
- Alessandro Bentivoglio (University of Edimburgh) Stochastic Model of Supercoiling-Dependent Transcription
- Luca Burratti (University of Rome Tor Vergata) Fluorescent silver nanoclusters as potential tool for bio-applications
- Francesca Ceccacci (CNR-ISB) Design of novel cationic liposomes for brain delivery
- Ines Delfino (Università della Tuscia Dipartimento di scienze ecologiche e biologiche) Characterization of X-ray irradiated cell culture media by means of Surface-Enhanced Raman Spectroscopy
- Maya Dimova Lambreva (CNR-IC) Probing the interaction of nanotubes and photosynthetic complexes
- Francesco Brasili (University of Rome Tor Vergata) In vitro analysis of the mechanical and biological effects induced by the ultrasound-cell interaction

### 3<sup>rd</sup> Session

- **Michael Di Gioacchino** (Università degli Studi Roma Tre) Protection of Trehalose Against Dehydration for Model Peptide
- **Emiliano De Santis** (University of Rome Tor Vergata Dept of Physics & INFN) Styrene-Dopamine receptor affinity: a Molecular Dynamics study
- **Aishwarya Dhar** (University of Rome Tor Vergata) A $\beta$  peptides and  $\beta$ -sheet breakers. A coarse grained molecular dynamics approach using GO-Martini
- Giuseppina Rea (CNR-IC) Functional dynamics of photosynthetic cells useful for biosensor development
- Giovanna Boumis (Sapienza University of Rome, Dept of Biochemical Sciences “A. Rossi Fanelli”) Targeting de novo thymidylate synthesis nuclear complex
- Blasco Morozzo della Rocca (University of Rome Tor Vergata, Dept of Experimental Medicine) Synthesis and properties of a new benzamide-containing nitrobenzoxadiazole endowed with high stability to metabolic hydrolysis
- Marina Carbonaro (CREA Council for agricultural Research and Economics, research Centre for Food and Nutrition) Cytochrome c-based films and fibril superstructures as protein biomaterials: a SEM and IR spectroscopy investigation
- Francesca Cardamone (University of Cagliari, Dept of Physics) Characterization and identification of Ampicillin and Amoxicillin binding sites within the multidrug transporter MexB of *P. Aeruginosa*
- Alessandra Camarca (CNR-ISA) Effect of substrate binding on the *E. coli* MNM deamidase structure
- Alice Romeo (University of Rome Tor Vergata, Dept of Biology) Molecular behavior, molecular docking and molecular dynamics simulation techniques applied to the design of a novel APC/C inhibitor
- Silvia Franco (SBAI & CNR-ISC) Rheology and phase behavior of multi-responsive soft microgels
- Isabel Nogues (CNR-IRET) One-carbon metabolism enzyme Serine Hydroxy Methyl Transferase and salt tolerance in the cyanobacteria *Aphanothece halophytica*

**May 16<sup>th</sup>**

### 4<sup>th</sup> session

- Ivan Mazzetta (Sapienza University of Rome) Wearable microdevices for muscle activity and human gait sensing in Parkinson’s Disease
- Fabrizio Parente (Sapienza University of Rome) Characterizing functional brain networks of relatively homogeneous subjects under resting state
- Giovanna Zimatore (eCampus University and CNR-INM) A Nonlinear Analysis of HR during a skiing experience and a day at work
- Fabio De Matteis (University of Rome Tor Vergata) Design of scaffolds tailored on human adult stem cell for enhancing osteogenesis
- Stefano Pascarella (Sapienza University of Rome) Atomistic simulations of GabR transcription factor at microsecond scale
- Maria Grazia Lolli (CNR-IFT) Sub-5nm silica-coated superparamagnetic iron oxide fluorescent nanoparticles for application in stem cell-based therapy through magnetic targeting of human mesenchymal stromal cells

- Eleonora Nicolai (University of Rome Tor Vergata) A feasibility study for the optimization of Biesse Bioscreen as benchless detector for microplastics in liquid media
- Aliya Tychengulova (Sapienza University of Rome) On the relevance of synthetic manganese model compound to OEC of PS II: vibrational fingerprints of Mn<sub>4</sub>Ca clusters
- Anna Imbriano (Sapienza University of Rome, Dept of Drug Chemistry and Technology) pHLLIP-coated niosomes as novel delivery systems for cancer therapy
- Federica Valentini (Tor Vergata University Rome Chemistry Dept) Graphene derivatives: synthesis, characterization and application in gas sensing devices. Raman study of the interactions among NO, NO<sub>2</sub> gaseous pollutants, and the graphene gas sensitive layers.
- Mariano Bizzarri (Sapienza University of Rome, Systems Biology Group lab) Patterns of gene expression in microgravity
- Maddalena Daniele (Università Cattolica del Sacro Cuore) Metabolic imaging of erythrocyte and leukocytes plasma membrane fluidity for a quantitative biological evaluation of cardiovascular risk score in type

### 5<sup>th</sup> session

- **Sebastien Balme** (Institut Européen des Membranes, CNRS, Montpellier, France) Single Nanopore to Follow Tau Protein Aggregation Induced by Heparin.
- **Mauro Chinappi** (University of Rome Tor Vergata, Department of Industrial Engineering) Protein Sequencing via Nanopore Based Devices: a Theoretical/Numerical Perspective.
- **Laura Fazi** (University of Rome Tor Vergata, NAST Center) Carbon nanotube-based stretchable composite materials for electronic devices and applications
- Silvia Tralbalzini (Sapienza University of Rome, Drug Chemistry and Technology Department) Satureja montana Essential Oil as potential antibacterial agent: study of interaction with model membrane systems
- Simone Bonacorsi (Università degli studi di Roma Tor Vergata) Spectroscopic studies of membrane perturbation induced by the antimicrobial peptidomimetic NCK-10
- Elisa Grelloni (Università degli studi di Roma Tor Vergata) Perturbation of model membranes by two antimicrobial peptides with different hydrophobicity
- Marco Sette (University of Rome Tor Vergata, Dept of Chemical Sciences) Structural characterization and biological activity of Crabrolin and isoforms with different positive charge
- Sergio Forcelloni (Sapienza University of Rome, Dept of Physics) Evolutionary forces on different flavors of intrinsic disorder in the human proteome
- Marco D'Abramo (Sapienza University of Rome, Dept of Chemistry) Learning by teaching: the theoretical-computational characterization of a miniprotein (an experiment made by students of the Biol. Phys. Chem. course)
- Stefano Aiello (Sapienza University of Rome) Glycosylated liposomes for targeting bacteria
- Valerio Santucci (University of Rome Tor vergata) Exploring the allosteric mechanism of oncogenic tyrosine phosphatase shp2 for the design of peptide inhibitors
- Luca Digiacoimo (Sapienza University of Rome, Dept of Molecular Medicine) Graphene oxide-protein interactions for the early detection of pancreatic cancer: A bio-nano interface perspective