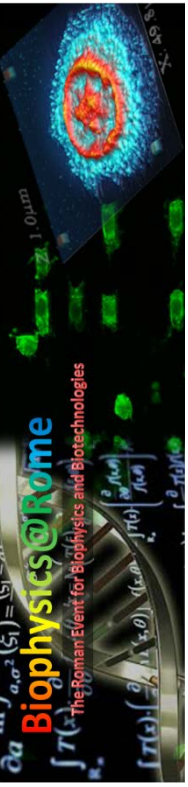


Biophysics@Rome 2014

May 22nd

9.15 -10.00 Registration & BREAKFAST
10.00-10.30 Institutional Greetings and Conference Opening

SESSION 1 NETWORKS&MODELING Chair: J. Rau, L. Businaro

10.30-10.45 A. Barra, *Finitely Connected Lymphocyte Networks in the Immune System*
10.45-11.00 L.B. Caruso, *Topological Networks in the study of protein structure-function relationships*
11.00-11. 15 G. Dattoli, *Scaling laws, tumor evolution, capillary networks and metastasis diffusion*
11.15-11.30 L. Guidoni, *The molecular biophysics of photosynthesis explored by first principles*
11.30-11.45 D. Simone, *Modeling neuronal structure-function relationships: a computational approach*

12.00-14.00 Lunch & Poster Session

SESSION 2 PROTEINS Chair: V. Mussi, L. Stella

14.00-14.45 ***Invited Talk:*** **B. Bechinger**
Biophysical investigations of designed histidine-rich peptides with potent biological activities

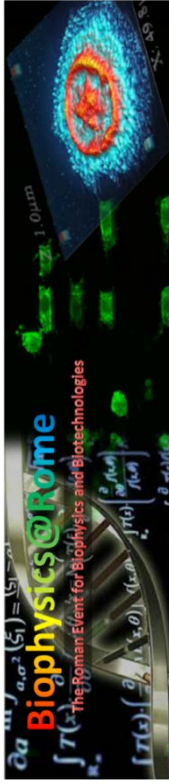
14.45-15.00 D. Di Marino, *All-atom MD Simulation of Protein Translocation through α-hemolysin Nanopore: Implications for Protein Sequence/Structural Analyses*
15.00-15.15 F: Cecconi, *Coarse-grained modeling of protein unspecifically bound to DNA*
15.15-15.30 M. Chinappi, *Protein translocation through nanopores: multistep translocation pathways from Molecular Dynamics simulations*

15.30-16.15 Coffee Break & Poster Session

SESSION 3 SENSORS&MATERIALS Chair: F. Di Pietrantonio, L. Maiolo

16.15-17.00 ***Invited Talk:*** **S. D'Auria,**
Understanding Protein Structure Opens New Diagnostic Avenues

17.00-17.15 F. Marracino, *Characterization of GafChromic EBT3 films with 60CO and low energy protons for radiobiology dosimetry*
17.15-17.30 J.E. Villarreal-Barajas, *Luminescence response of pure LiF crystals irradiated with 60Co gamma rays and MV x rays clinical beams*
17.30-17.45 A. Moleti, *Cochlear scale-invariance and time-frequency analysis of optoacoustic emissions*
17.45-18.00 A. Rinaldi, *Statistical methods for the design of bioscaffolds for tissue engineering*



May 23rd

SESSION 4: MICROSCOPY&SPECTROSCOPY I Chair: F. Bertani, M. Girasole

9.30-10.15 ***Invited Talk:*** **P. Gilbert**
Phase Transitions in CaCO3 biominerals mapped with 20-nm resolution

10.15-10.30 M. D'Acunto, *Cell Motility, Contact Guidance and Mechanotaxis*
10.30-10.45 F. Bonfigli, *Soft X-ray contact microscopy of dry biological samples and in vivo plant cells on high spatial resolution lithium fluoride fluorescent imaging detectors*

10.45-11.00 Coffee Break

SESSION 5: MICROSCOPY&SPECTROSCOPY II Chair: A. Notargiacomo, A. Cedola

11.00-11.15 L. Stella, *Behaviour of antimicrobial peptides in phospholipid membranes: insights from combined spectroscopic and simulative studies*
11.15-11.30 S. Dinarelli, *Morphological and nanomechanical properties of RBC: chemical and physiological pathways*
11.30-11.45 A. De Ninno, *Microfluidics co-culture environments to explore complex cancer and immune cells related dynamics*
11.45-12.00 P. Varju, *Real-time 3D fast two-photon imaging microscopy: from the technological point to the in vivo biological applications*

12.15-14.00 Lunch & Poster Session

SESSION 6 BIOCHEMISTRY&AGGREGATION KINETICS I Chair: L. Suber, A. Gerardino

14.00-14.45 ***Invited Talk:*** **A. Cattaneo**
Neurotrophin deficits as an upstream mechanism for Alzheimer's neurodegeneration: therapeutic opportunities

14.45-15.00 E. Agliari, *Cybernetical approaches in biochemical kinetics*
15.00-15.15 D. Narzi, *Pathway for Mn cluster oxidation by Tyrosine-Z in the S2 state of PhotosystemII*
15.15-15.30 A. De Ninno, *Effect of weak magnetic fields on acid-base equilibrium of L-Phe*
15.30-15.45 J Rau, *New generation of bioactive materials for implant coating applications in regenerative nanomedicine*

15.45-16.30 Coffee Break & Poster Session

SESSION 7 BIOCHEMISTRY&AGGREGATION KINETICS II Chair: M. D'Acunto, A. Pecora

16.30-16.45 A. Magliano, *Molecular dynamics study on fibrillogenesis: all-atom self-aggregation of amyloidogenic peptides in explicit water*
16.45-17.00 V. Minicozzi, *Computational and Experimental Studies on beta-Sheet Breakers Targeting Abeta(1–40) Fibrils*
17.00-17.15 F. Stellato, *Copper–Zinc cross-modulation in prion protein binding*
17.15-17.30 A. M. Bersani, *Enzyme kinetics and quasi-steady state approximations: a mathematical point of view*

17.30 -18.00 Closing Remarks and Image Contest "BiophysicART""