

Scientific Programme

SATURDAY, JULY 11th 2009 PALAZZO DUCALE, SALA MAGGIOR CONSIGLIO

Piazza Giacomo Matteotti, 9, 16123 Genova

Web site : <http://www.palazzoducale.genova.it>

14.00-19.00 **Registration**

17.00-17.15 **Opening Ceremony**

17.15-17.30 **Antonio Borsellino Memoir**

Franco Gambale, Institute of biophysics, CNR, Genova, Italy

Chair: Alessandra Gliozzi, Department of physics, University of Genoa, Italy

17.30-18.30 **PLENARY LECTURE**

Stefan W. Hell, Max Planck Institute, Göttingen, Germany

Far-field optical nanoscopy

Chair: Daniel Evanko, Nature Methods Editor

18.30-19.30 **Welcome Reception**

SUNDAY, JULY 12th 2009 CENTRO CONGRESSI DEL MAGAZZINI DEL COTONE
Via Magazzini del Cotone, 16128 Genova
Web site : <http://www.cotonecongressi.it>

9.00-10.00 PLENARY LECTURE

Fabio Beltram, NEST Laboratory, Scuola Normale Superiore, Pisa, Italy

In vivo molecular sensing: fluorescence beyond labeling

Chair: Fred S. Wouters, University of Göttingen, Germany

10.30-12.30 1. MEMBRANE MICRODOMAINS AND SIGNALLING

Chairs: M. Prieto and C. Tacchetti

Invited speakers

Enrico Gratton, Irvine, California, U.S.A.

Measuring diffusion by spatial-cross-correlation

Christian Ringemann, Göttingen, Germany

Exploring the nanoscale: Dynamics of lipid rafts revealed by STED fluorescence spectroscopy

Paul O'Shea, Nottingham, U.K.

Modulation of the properties of membrane microdomains as a control mechanism in cellular physiology

Short talks

Nicholas I. Smith, Osaka, Japan

Membrane potential dynamics of living cells in response to femtosecond laser irradiation

Mario Brameshuber, Linz, Austria

Imaging of mobile stable lipid rafts in the live cell plasma membrane

Davide Boido, Genova, Italy

Synapsin Knock-Out mice as an in vitro model of human epilepsy studied with Multi-Electrode Arrays

Thorsten M. Staudt, Heidelberg, Germany

Calyx of Held: STED nanoscopy of a glutamatergic terminal

10.30-12.30 2. CHROMATIN, NUCLEOSOMES AND MOLECULAR MACHINES

Chairs: D. Dunlap and J. Carrascosa

Invited speakers

Mario Faretta, Milan, Italy

Chromatin changes in leukemia: an imaging approach to study deregulated transcription in cancer

Sanford Leuba, Pittsburgh, Pennsylvania, U.S.A.

Nucleic acid-protein interactions: one-at-a-time

Jörg Langowski, Heidelberg, Germany

Chromatin dynamics: simulations and single molecule fluorescence studies

Kunio Takeyasu, Kyoto, Japan

Nucleosome dynamics dependent on salt environment, H1, Topo II, and histone tails

Short talks

Nikolay Korolev, Singapore, Singapore

A universal description for salt-(in)dependent oligocation-induced DNA condensation

Alexander M. Polyanchko, Saint-Petersburg, Russian Federation

Structural organization of supramolecular complexes of DNA with chromosomal proteins HMGB1 and H1

10.30-12.30 3. LIVE CELL IMAGING I

Chairs: P. Bianchini and P Saggau

Invited speakers

Dave Piston, Nashville, Tennessee, U.S.A.

Imaging cellular communication in insulin secretion *ex vivo* and *in vivo*

Jurek W. Dobrucki, Kraków, Poland

Heterochromatin protein 1 in DNA damage response - recruitment or dissociation from repair sites?

Short talks

Dan Cojoc, Trieste, Italy

Local BDNF delivery by means of laser tweezers to stimulate hippocampal neurons signalling

Itay Rousso, Rehovot, Israel

Retrovirus induced remodeling of the host cell actin architecture

Ilaria Testa, Zoagli, Italy

Protein kinetic evaluations by two photon photoactivation in living cells

Stephan Junek, Göttingen, Germany

Activity correlation imaging: visualizing function and structure of neuronal populations

Houssam Hajjoul, Toulouse, France

Fast 3D chromatin dynamics studied in living yeasts using a novel lab on chip technology

12.30-14.00 POSTER SESSION, LUNCH & EXHIBITS

14.30-16.00 NEW & NOTABLE

Chairs: G. Scoles and A. Watts

16.30-18.30 4. MULTISCALE SIMULATION

Chairs: G. A. Voth and S. Morante

Invited speakers

Mark Sansom, Oxford, U.K.

Multiscale simulations of membrane proteins

Valentina Tozzini, Pisa, Italy

Bridging atomistic and meso- scale with minimalist models for bio-molecules

Richard Lavery, Lyon, France

Protein mechanics, function and recognition

Short talks

Durba Sengupta, Groningen, Netherlands

Membrane aoration by antimicrobial peptides combining atomistic and coarse-grained descriptions

Velia Minicozzi, Rome, Italy

The role of water in Zn(II)-Abeta(1-16) complexes

Sundar Raman Subramanian, Heidelberg, Germany

On the structural and dynamic determinants of the specific recognition of collagen by collagenase

16.30-18.30 5. RNA WORLD

Chairs: D. Lilley and J. D. Puglisi

Invited speakers

David Lilley, Dundee, U.K.

Structure and mechanism of the Varkud Satellite ribozyme

David Rueda, Detroit, Michigan, U.S.A.

Single molecule studies of spliceosomal RNAs U2 and U6

Kiyoshi Nagai, Cambridge, U.K.

Title to be announced

Joseph D. Puglisi, Stanford, California, U.S.A.

Title to be announced

Short talks

Eric Ennifar, Strasbourg, France

A structure-based approach for targeting HIV-1 genomic RNA Dimerization Initiation Site

Michael Petersen, Odense Sø, Denmark

Structural basis for the encapsidation process of turnip yellow mosaic virus

16.30-18.30 6. LIVE CELL IMAGING II

Chairs: M. Faretta and M. Digman

Invited speakers

Alessandro Esposito, Cambridge, U.K.

Quantitative imaging and the homeostasis of *Plasmodium falciparum* infected erythrocytes

Don C. Lamb, Munich, Germany

HIV budding and release

Peter Saggau, Houston, Texas, U.S.A.

Advanced neuroimaging with diffractive optical elements

Short talks

Wolfgang Becker, Berlin, Germany

Fast-Acquisition Multispectral FLIM by Parallel TCSPC

Marina Kuimova, London, U.K.

Molecular rotors measure intracellular viscosity

Thomas Gensch, Juelich, Germany

Intracellular calcium and chloride concentrations in neuronal cells – a Fluorescence Lifetime Imaging (FLIM) approach

Giuseppe Vicidomini, Göttingen, Germany

Blind image restoration in 4Pi microscopy with space-variant point-spread-function

MONDAY, JULY 13th 2009 CENTRO CONGRESSI DEL MAGAZZINI DEL COTONE
Via Magazzini del Cotone, 16128 Genova
Web site : <http://www.cotonecongressi.it>

9.00-10.00 PLENARY LECTURE

Carol V. Robinson, University of Cambridge, U.K.

Mass spectrometry and its role in structural biology

Chair: Anthony Watts, Oxford University, U.K.

10.30-12.30 7. INTERACTION AND RECOGNITION OF DNA

Chairs: C. Royer and L. Finzi

Invited speakers

David Dunlap, Atlanta, Georgia, U.S.A.

The rate of topoisomerase II activity correlates with persistence length of DNA

Loredana Casalis, Trieste, Italy

Towards multiprotein nanochips using nanografting and DNA directed immobilization of proteins

Short talks

Yves Mély, Illkirch, France

Mechanism of the nucleic acid chaperone properties of the HIV-1 nucleocapsid protein

Fenfei Leng, Miami, U.S.A.

Molecular mechanisms of the mammalian high mobility group protein AT-hook 2 recognizing AT-rich DNA

Bjørn Torger Stokke, Trondheim, Norway

Amplification of oligonucleotide sequence recognition using bioresponsive hydrogels

Fredrik Westerlund, Copenhagen East, Denmark

Local conformation of confined DNA studied using emission polarization anisotropy

10.30-12.30 8. IMAGING AND SPECTROSCOPY I

Chairs: F. Cella and E. Ronzitti

Invited speakers

Rainer Heintzmann, London, U.K.

Confocal microscopy at high resolution and efficiency by image inversion interferometry

Gael Moneron, Göttingen, Germany

Fast beam scanning stimulated emission depletion (STED) microscopy with continuous wave lasers

Daniel L. Farkas, Los Angeles, U.S.A.

Translational biophysics: multimode imaging for preclinical and clinical applications

Short talks

Karin Nienhaus, Ulm, Germany

Structural basis of enhanced photoconversion yield in GFP-like protein Dendra2

Marcel Ameloot, Diepenbeek, Belgium

A generalized quantitative FRAP method with no restriction on the size of the photobleached area

Davide Mazza, Bethesda, U.S.A.

Measurement of *in vivo* binding reactions with Fluorescence Correlation Spectroscopy (FCS)

10.30-12.30 9. BIOMATERIALS AND DRUG DELIVERY

Chairs: P. L. San Biagio and M. Coelho

Invited speakers

Silke Krol, Trieste, Italy

Selective drug delivery and novel drug approaches by polyelectrolytes

Gaio Paradossi, Roma, Italy

Soft matter for biomedicine: two case studies

Short talks

Marta M. B. Ribeiro, Lisboa, Portugal

A new brain-targeted analgesic peptide: from biophysics to *in vivo* proof-of-concept

Sylvie L  lu, Trondheim, Norway

Gene delivery with chitosan: influence of chain length on intracellular trafficking and dissociation

Alessandro Bosca, Genova, Italy

Planar patch clamp for neuronal networks

Sarah Heilshorn, Stanford, U.S.A.

Protein-based “epoxy-like” physical hydrogels for stem cell transplantation

Jose Luis Cuellar Camacho, Leipzig, Germany

Nanomechanics of Rubella virus shells: How soft viruses are?

10.30-12.30 10. STEM CELLS

Chairs: F. D'Adda di Fagnana and A. Uccelli

Invited speakers

Pier G. Pelicci, Milan, Italy

Regulation of self-renewal in Cancer Stem Cells

Antonio A. Uccelli, Genova, Italy

Therapeutic Plasticity of Adult Stem Cells for neurological diseases

Short talks

Tatiana Golovanova, St.-Petersburg, Russian Federation

Spontaneously proliferating and differentiating cells in the culture of new born rat cardiomyocytes

Alina Smorodchenko, Berlin, Germany

Expression of uncoupling proteins (UCPs) during neuronal differentiation and brain development

Sonia Scarfi, Genova, Italy

The plant hormone abscisic acid stimulates the proliferation of human hemopoietic progenitors through the second messenger cyclic ADP-ribose

12.30-14.30 POSTER SESSION, LUNCH & EXHIBITS**14.30-15.30 SPECIAL PLENARY LECTURE**

Martin Chalfie, 2008 Nobel Laureate, Columbia University, New York, U.S.A.

GFP: Lighting up life

Chair: Ranieri Bizzari, NEST, SNS-IT, Italy

16.00-18.00 11. SOLAR ENERGY CONVERSION AND PHOTOSYNTHESIS

Chairs: G. Giacometti and R. Bassi

Invited speakers

Roberto Bassi, Verona, Italy

Mechanisms of light harvesting and excess energy dissipation in plants and algae

Wolfgang Lubitz, Mülheim an der Ruhr, Germany

Investigation of [NiFe]- and [FeFe]-hydrogenases: basis for a biotechnological hydrogen production

James Barber, London, U.K.

Unravelling the structure of the water splitting site of photosynthesis and implications for mechanism of catalysis

Vincenzo Balzani, Bologna, Italy

Photochemically controlled molecular devices and machines

Short talk**Tomas Morosinotto**, Padova, Italy

Structural bases for the pH-dependent activation of violaxanthin de-epoxidase

16.00-18.00 12. IMAGING AND SPECTROSCOPY II*Chairs: G. Arcovito and E. Gratton***Invited speakers****László Mátyus**, Debrecen, Hungary

Effect of HLA-II on the distribution of HLA-I on the surface of lymphoid cells

Michelle A. Digman, Irvine, California, U.S.A.

Determining stoichiometry of molecular complexes in live cells

Christoph Cremer, Heidelberg, Germany

Spectrally Assigned Localization Microscopy (SALM): A new approach in nuclear genome biophysics

Short talks**Philippe Carpentier**, Grenoble Cedex1, France

Structural basis of photobleaching in a Green Fluorescent Protein

Jelle Hendrix, Leuven, Belgium

LEDGF/p75 switches from a dynamic to a tight chromatin interaction upon binding to HIV-1 integrase

Maddalena Collini, Milano, Italy

Millisecond photo-switching dynamics of E222Q GFP mutants for sensor and imaging applications

16.00-18.00 13. GLYCOBIOPHYSICS*Chairs: L. Cantù and A. Imberty***Invited speaker****Soledad Penadés Ullate**, San Sebastian, Spain

Glyconanoparticles: Nano-biomaterials for application in biotechnology and biomedicine

Short talks**Santiago Di Lella**, Buenos Aires, Argentina

Solvent occupancy analysis in ligand structure prediction: the case of Galectin-1

Alessandra Nurisso, Grenoble Cedex 9, FrancePerception of Nod Factors in the Legume-Rhizobia symbiosis: in silico studies on *Medicago truncatula*

Leila Maria Beltramini, Sao Carlos, Brazil

Interaction between frutalin with biomembrane models and its correlation with cell adhesion property

Giovanna Navarra, Palermo, Italy

Thermal aggregation of glycated Bovine Serum Albumin

16.00-18.00 14. CONDENSED COLLOIDAL PHASE IN BIOLOGY:
FROM PROTEINS CRYSTALS TO AMYLOID FIBRILS

Chairs: D. Bulone and T. Wilkinson

Invited speakers

Cecile A. Dreiss, London, U.K.

Conformational dynamics and oligomerization pathways of the ovine prion protein

Luigi Bubacco, Padova, Italy

Modification by Dopamine adducts links α -synuclein to oxidative stress in Parkinson disease

Peter Schurtenberger, Fribourg, Switzerland

Protein condensation diseases - a colloid physicists viewpoint

Sudipta Maiti, Mumbai, India

Investigating toxic protein nanoclusters and their interactions with living cells

Short talks

Ricardo H. Pires, Porto, Portugal

TTR amyloid protofilament assembly revealed by AFM imaging and single molecule force spectroscopy

Annalisa Relini, Genoa, Italy

Expanded ataxin-1 induces membrane mechanical instability: evidences from model systems and cells

19.30-24.00 **Social Dinner:** *Villa Lo Zerbinò*
<http://www.villalozerbino.it/>

EBSA 25 Years Celebrations

TUESDAY, JULY 14th 2009 CENTRO CONGRESSI DEL MAGAZZINI DEL COTONE
Via Magazzini del Cotone, 16128 Genova
Web site : <http://www.cotonecongressi.it>

9.30-10.30 PLENARY LECTURE

Edward H. Egelman, University of Virginia, Charlottesville, Virginia, U.S.A.

Divergence in protein polymers: implications for evolutionary mechanisms

Chair: Peter Bayley, National Institute for Medical Research, U.K.

10.45-12.45 15. PHOTORENSORY BIOPHYSICS

Chairs: G. Colombetti and S. Lucia

Invited speakers

Giorgio Rispoli, Ferrara, Italy

Calcium transport and phototransduction in isolated rod outer segments

John L. Spudich, Houston, Texas, U.S.A.

Microbial rhodopsins: receptors, channels, and pumps from a single design

Tilman Kottke, Bielefeld, Germany

Light perception by phototropin studied with time-resolved infrared spectroscopy

Short talks

Ulrike Alexiev, Berlin, Germany

Monitoring the interaction of single G-proteins with rhodopsin disk membranes upon light-activation

Irina Kleps, Bucharest, Romania

Biosensing applications of micro/nano structured silicon

Isabella Panfoli, Genova, Italy

Do retinal rod outer segments carry out oxydative phosphorylation?

10.45-12.45 16. SINGLE MOLECULE BIOPHYSICS

Chairs: S. Cannistraro and D. Dunlap

Invited speakers

Anna Rita Bizzarri, Viterbo, Italy

Nanosopic and spectroscopic investigation of p53-based complexes at single molecule level

Laura Finzi, Atlanta, U.S.A.

Elucidation of the mechanism of the lambda bacteriophage epigenetic switch

Peter Hinterdorfer, Linz, Austria

Single molecule force spectroscopy and recognition imaging

Short talks**Mickaël Castelain**, Umeå, SwedenHelixlike pili is a prerequisite of uropathogenic *E. coli* to adhere to host and withstand urine flow**Ruth Díez-Ahedo**, Barcelona, Spain

Biofunctional micropatterned surfaces to study the spatio-temporal organisation of LFA-1

Aurelie Dupont, München, Germany

Direct observation of twisting steps during Rad51 polymerization on DNA

10.45-12.45 17. STATISTICAL, SOFT MATTER AND BIOLOGICAL PHYSICS*Chairs: V. Martorana and H. Grubmüller***Invited speakers****Antonio Cupane**, Palermo, Italy

Watching hemoglobin at work inside intact red blood cells by Time-Resolved Wide Angle X-Ray Scattering

Mathias Winterhalter, Bremen, Germany

Translocation through nanopores: Ion conductance, selectivity and facilitated diffusion

Francesco Sciortino, Roma, Italy

Self assembly of patchy particles and DNA-functionalized dendrimers

Short talks**Patrik Bjöörn**, Vastra Frolunda, Sweden

Towards mechanistical understanding of adsorption: combining technologies in situ and in real time

Fabio Ferri, Como, Italy

Modeling of fibrin gels using confocal microscopy, light scattering and turbidimetry

Andrew Spakowitz, Stanford, U.S.A.

Target site search strategy of gene regulatory proteins

12.45-14.45 POSTER SESSION, LUNCH & EXHIBITS**14.45-16.15 EBSA GENERAL ASSEMBLY****16.30-17.30 PLENARY LECTURE****Janos Hajdu**, Uppsala University, Sweden

Title to be announced

Chair: Silvia Morante, University of Rome "Tor Vergata", Italy

17.30-19.30 18. BIOMOLECULAR SELF-ASSEMBLY*Chairs: A. Sgarbossa and O. Cavalleri****Invited speakers*****José Luis Toca-Herrera**, San Sebastian, Spain

Bacterial protein self-assembly on surfaces of well-defined chemistry

Annalisa Pastore, London, U.K.

Polyglutamine aggregation and neurodegeneration

Valerica Raicu, Milwaukee, Wisconsin, U.S.A.*In vivo* determination of structure and distributions of supra-molecular associations**Mattia Rocco**, Genova, ItalyA multi-resolution approach to the structure and function of integrin $\alpha\text{IIb}\beta 3$ ***Short talks*****Marta de Frutos**, Orsay, France

Physical mechanisms controlling DNA ejection from tailed bacteriophages

Phanourios Tamamis, Nicosia, Cyprus

Self-assembly of phenylalanine oligopeptides: insights from experimental and computational studies

17.30-19.30 19. STRUCTURE-FUNCTION RELATIONSHIP IN CHANNELS, PUMPS AND EXCHANGERS*Chairs: A. Gliozzi and G. Bartosz****Invited speakers*****Ildikò Szabò**, Padova, Italy

Interaction of Bax with a mitochondrial potassium channel is crucial for its action in apoptosis

Francisco J. Barrantes, Bahia Blanca, Argentina

“Social” domain organization and dynamics of nicotinic acetylcholine receptor at the cell membrane

Short talks**Sophie Aimon**, Paris, France

Reconstitution of fluorescent voltage gated ion channels in giant unilamellar vesicles

Ben Corry, Crawley, Australia

Open channel structure of MscL from FRET microscopy and simulation

Anna Moroni, Milan, ItalyTwo gating modalities in the pore of the miniature K^+ channel Kcv**Natascia Vedovato**, New York, U.S.A.

Deletion of the C-terminus destabilizes phosphorylated Na/K pump state containing 3Na ions

Dimitri E. Khoshtariya, Tbilisi, Georgia

Electron transfer patterns and inherent mechanisms for cytochrome c and azurin at Au/SAM junctions

17.30-19.30 20. BIOLOGICAL MOTILITY AND MOLECULAR MOTORS

Chairs: M. Ferenczi and G. Cappello

Invited speakers

Gertrude Bunt, Göttingen, Germany

Cellular tension influences the conformational behavior of FAK during cell migration and spreading

Michael A. Ferenczi, London, U.K.

Investigating cross-bridge interactions in muscle fibres using Fluorescence Life Time Imaging

Vincent Torre, Trieste, Italy

Molecular mechanisms underlying force generation in vertebrate neurons

Short talks

Imre Derenyi, Budapest, Hungary

Neck linker docking coordinates the kinetics of kinesin's heads

Alvina Vazina, Pushchino Moscow Region, Russian Federation

Pulling as a factor in forming the heterophasic structure of immunoglobulin proteins

Iva Tolic-Norrelykke, Dresden, Germany

Self-organization of dynein motors generates meiotic nuclear oscillations

WEDNESDAY, JULY 15th 2009 CENTRO CONGRESSI DEL MAGAZZINI DEL COTONE
Via Magazzini del Cotone, 16128 Genova
Web site : <http://www.cotonecongressi.it>

9.00-10.00 PLENARY LECTURE

Philip Anfinrud, NIH, Bethesda, Maryland, U.S.A.

Watching proteins function in real time via time-resolved X-ray diffraction and solution scattering

Chair: Cristiano Viappiani, University of Parma, Italy

10.30-12.30 21. ION CHANNELS IN CHANNELOPATHIES AND CANCER

Chairs: M. Pusch and M. Dalla Serra

Invited speakers

Mustafa B. A. Djamgoz, London, U.K.

Biophysical characteristics and clinical potential of ion channel expression in human cancer cells

Michael Pusch, Genova, Italy

Mechanisms of transport coupling in CLC Cl⁻/H⁺ antiporters involved in human genetic

Short talks

Moacir Marocolo, Juiz de Fora, Brazil

Cardiac effects of anabolic steroids: an electrophysiological approach

Joana F. Monteiro, Oeiras, Portugal

The role of ion dynamics in zebrafish fin regeneration

Johanna Nilsson, Stockholm, Sweden

Local anaesthetic binding to Shaker channels: Role of aromatic residues

Martin Hohenegger, Vienna, Austria

NF676, is a cell permeable and specific inhibitor of the calcium release channel ryanodine receptor

Giovanni Zifarelli, Genova, Italy

Deuterium isotope effects on fast gating of the chloride channel ClC-0

Sandrine Lécart, Orsay Cedex, France

Fluorescence imaging for a MVAC chemotherapy resistance predictive test in human bladder cancer

10.30-12.30 22. PROTEIN-LIGAND INTERACTIONS

Chairs: C. Viappiani and A. Cupane

Invited speakers

Martino Bolognesi, Milano, Italy

Archaeal protoglobin 3D-structure: novel ligand diffusion paths and heme-reactivity modulation

Dario A. Estrin, Buenos Aires, Argentina

Computer simulation of ligand binding and reactivity of heme proteins

Muriel Delepierre, Paris, France

Serratia Marcescens heme acquisition system: heme transport and protein:protein interactions

Short talks

Christian Seifert, Mannheim, Germany

Force distribution analysis (FDA) of the signal transduction of *E.Coli* chaperone Hsp90 (HtpG)

Samia Aci-Seche, Orléans, France

Sampling the flexibility of PPAR- γ

Alessandro Arcovito, Rome, Italy

Kinetic and structural study of a bacterial heme sensor

Stefania Abbruzzetti, Parma, Italy

Ligand migration in human neuroglobin highlights a complex system of interconnected cavities

10.30-12.30 23. FLUORESCENT PROTEINS

Chairs: R. Bizzarri and S. Hess

Invited speakers

S. James Remington, Eugene, Oregon, U.S.A.

Mechanism and applications of photo- and redox-switchable fluorescent proteins

Fred S. Wouters, Göttingen, Germany

GFP-based FRET biosensors for neurodegenerative disease mechanisms

Katrin I. Willig, Göttingen, Germany

TED nanoscopy in living cells using fluorescent proteins

Theodorus W. J. Gadella, Amsterdam, The Netherlands

A twice brighter cyan fluorescent protein with monoexponential decay by FLIM screening

Short talks

Andre C. Stiel, Göttingen, Germany

Reversibly switchable fluorescent proteins

Stefano Luin, Pisa, Italy

Photochromic green fluorescent protein mutants: chromophore states unveiled by Raman spectroscopy

Ammasi Periasamy, Charlottesville, Virginia, U.S.A.

FRET microscopy: red fluorescent proteins as an acceptor

10.30-12.30 24. LIPID BIOPHYSICS I

Chairs: A. Alonso and A. Killian

Invited speakers

Amitabha Chattopadhyay, Hyderabad, India

Organization and dynamics of the serotonin-1A receptor in live cells using fluorescence microscopy

Luis A. Bagatolli, Odense, Denmark

Correlation of the lateral structure of lipid bilayers and monolayers using two photon excitation fluorescence microscopy

Short talks

Sandro Keller, Berlin, Germany

A new ITC assay for measuring high- and low-affinity protein–ligand interactions

Jelena Jeftic, Rennes Cedex 7, France

Structural studies of supramolecular assemblies based on new dissymmetrical bolaamphiphile molecules

Sterenn Le-Nen-Davey, Exeter, U.K.

Oxidative stress and the membrane dipole potential; modulation with tocopherol

Vanessa Zhendre, Pessac, France

Phosphoinositides in nuclear membrane assembly

12.30-14.30 POSTER SESSION, LUNCH & EXHIBITS

14.30-16.30 25. LIPID BIOPHYSICS II

Chairs: E. J. Dufourc and A. Chattopadhyay

Invited speaker

Alicia Alonso, Leioa, Spain

Imaging phospholipase C/ sphingomyelinase activity in vesicles containing coexisting ordered-disorderd and gel-fluid domains

Short talks

Hanna P. Wacklin, Grenoble Cedex 9, France

Catalysis in the membrane: Interfacial mechanism of Phospholipase A2

John M. Seddon, London, U.K.

A 3-D hexagonal inverse micellar lyotropic phase

Jonas Henriksen, Roskilde, Denmark

Effects of lysolipids on the mechanical stability of lipid membranes

Joaquim M. t. Marquês, Lisboa, Portugal

The role of lipid domains and rafts in ethanol induced membrane alterations – an AFM study

Jonathan W. Armond, Coventry, U.K.

Pulling membrane tubes from solid-supported lipid bilayers with atomic force microscopy

Zoran Arsov, Ljubljana, Slovenia

ATR-FTIR spectroscopy gives new insights into the lipid membranes in excess water

14.30-16.30 26. SINGLE MOLECULE FLUORESCENCE

Chairs: G. Chirico and Y. Engelborghs

Invited speakers

María F. García-Parajo, Barcelona, Spain

High-resolution spatiotemporal organization of the integrin LFA-1

Sam T. Hess, Orono, Maine, U.S.A.

Optical nanoscopy: FPALM breaks the diffraction limit

Gerhard J. Schütz, Linz, Austria

New approaches to measure interactions in the live cell plasma membrane

Short talks

Thorsten Wohland, Singapore, Singapore

Determination of dissociation constants in live cells and organisms by SW-FCCS

Johan Strömqvist, Stockholm, Sweden

Dissecting the molecular dynamics of cell surface receptors in immune cells using dual-color FCCS

Arnaud Sergé, Marseille, France

Dynamic multiple-target tracing probes spatiotemporal cartography of cell membranes

14.30-16.30 27. FOLDING / UNFOLDING OF PROTEINS

Chairs: M. Leone and A. Watts

Invited speakers

Jasna Brujic, New York, U.S.A.

Unexpected scaling laws in the mechanical unfolding of single protein molecules

Marco Brucale, Bologna, Italy

Single-molecule force spectroscopy investigation of the conformational equilibria of alpha-synuclein

Ashok Deniz, La Jolla, U.S.A.

Probing dynamics and folding of intrinsically disordered proteins by single molecule fluorescence

Short talks

Alexey Kazakov, Moscow, Russian Federation

Thermal unfolding of small heat shock protein Hsp22

Hervé Guillou, Grenoble, France

Super stabilization of alpha-lactalbumin: a calorimetric study

Ivan Lopez-Montero, Madrid, Spain

Exploring intrinsic disorder of unstructured membrane proteins by surface polymer physics

16.50-17.30 EBSA PRIZE LECTURE

17.30-18.30 CLOSING LECTURE

Carlos Bustamante, University of California, Berkeley, U.S.A.

Grabbing the cat by the tail: discrete steps by a DNA packaging motor and the inter-subunit coordination in a ring-ATPase

Chair: Bruno Samorì, University of Bologna, Italy

18.30-19.00 POSTER PRIZE AWARDS AND CLOSING CEREMONY

19.00-21.00 Farewell Cocktail

