

XXVII Congresso Nazionale SIBPA

Società Italiana di Biofisica Pura e Applicata

dal 16 al 20 giugno 2024

GENOVA



Public Opening Lecture

Tomaso Poggio

Eugene McDermott Professor in Brain Sciences, Center for Brains, Mind, and Machines Massachusetts Institute of Technology, Cambridge, MA, USA

Massimo Sideri

Editorialista scientifico Corriere della Sera, Professore di Storia socio-economica dell'Innovazione, Università Luiss, Roma

Vincent Torre

Professore di Neuroscienze, Scuola Internazionale Superiore di Studi Avanzati di Trieste, SISSA

Keynote speakers

Melody Di Bona

Radiation Oncology, Memorial Sloan Kettering Cancer Center, New York, USA

Elliot Elson

NSF Science and Technology Center for Engineering MechanoBiology, and Department of Mechanical Engineering & Materials Science, Washington University, St Louis, USA.

Leonel Malacrida

Unit of Advanced Bioimaging, Institut Pasteur de Montevideo, Uruguay

Marie Victoire Neguembor

Reprogramming and Regeneration Lab, Center for Genomic Regulation (CRG), Barcelona, Spain

Annalisa Pastore

The Maurice Wohl Institute, King's College London, UK.

Michael Pusch

Istituto di Biofisica, CNR, Genova

Giancarlo Ruocco

Center for Life Nano & Neuro Science, IIT, Roma

Giuliano Scarcelli

Fischell Department of Bioengineering, University of Maryland, USA

Giorgio Scita

Department of Oncology and Hematology-Oncology, Università degli Studi di Milano, Milano

Paul Wiseman

Department of Physics and Department of Chemistry, McGill University, Montréal, Canada

Invited speakers

Paolo Arosio

ETH Zurich – Inst. For Chemical and Bioengineering (ICB), Switzerland

Francesco Cardarelli

Laboratorio NEST, Scuola Normale Superiore, Pisa

Ornella Cavalleri

Dipartimento di Fisica, Università degli Studi di Genova, Genova

Francesca Cella Zanacchi

Dipartimento di Fisica, Università di Pisa, Pisa

Maddalena Collini

Dipartimento di Fisica "G.Occhialini", Università di Milano Bicocca, Milano

Katharina Landfester

Max Planck Institute for Polymer Research, Mainz, Germany

Gianluca Lattanzi

Dipartimento di Fisica, Università di Trento, Trento

Alessandro Podestà

Dipartimento Di Fisica "Aldo Pontremoli", Università Degli Studi Di Milano, Milano

Giovanni Romano

Dipartimento di Scienze Biomediche, Sperimentali e Cliniche 'Mario Serio', Università di Firenze, Firenze

Giulia Rossi

Programma in sintesi

	dom. 16	lun. 17	mar. 18	mer. 19	gio. 20
9.00		Annalisa Pastore	Leonel Malacrida	Giuliano Scarcelli	
9.30					
9.45					Giulia Rossi
10.15		Gianluca Lattanzi	Francesca Cella Zancchi	Katharina Landfester	comunicazioni orali
10.45		coffee break	coffee break	coffee break	
11.15		comunicazioni orali	comunicazioni orali	comunicazioni orali	coffee break
11.45					Cerimonia Premi
13.00		Packed Lunch	Packed Lunch	Packed Lunch	chiusura del congresso
14.00		Giovanni Romano	Maddalena Collini	Paul Wiseman	
14.30		Ornella Cavalleri	Francesco Cardarelli		
14.45				Barbara Storti	
15.00		registrazione	comunicazioni orali	comunicazioni orali	comunicazioni orali
15.15					comunicazioni orali
16.00			coffee break and POSTER	coffee break and POSTER	coffee break and POSTER
17.00	apertura del congresso				
17.15	Marie Victoria Neguembor	comunicazioni orali	comunicazioni orali	comunicazioni orali	
18.00	Elliot Elson	Giancarlo Ruocco	Michael Pusch	Melody Di Bona	
19.00	WINE AND FOCACCIA		apericena		
20.00					
21.00		Tomaso Poggio, Massimo Sideri, Vincent Torre		ASSEMBLEA DEI SOCI	CENA SOCIALE

Sede del congresso

Sala delle Grida, Palazzo della Borsa, via XX Settembre 44 R, 16121 Genova



Costruito nel 1912 per ospitare la nuova borsa valori di Genova, che dopo secoli di convivenza in vari luoghi cittadini si separava fisicamente dalla borsa delle merci, il Palazzo della Borsa è un maestoso esempio di architettura Liberty, costruito con intenti fastosi e celebrativi per sottolineare l'importanza della struttura finanziaria genovese e il volume degli affari trattati. La Camera di Commercio è ancora oggi proprietaria della storica Sala delle Grida dove avevano luogo le contrattazioni, dell'attigua Sala del Telegrafo e dei locali soprastanti, che attualmente ospitano il Centro Ligure per la Produttività, l'Agenzia camerale per la formazione.

Dopo la chiusura delle contrattazioni, nel 1998, la Camera di Commercio ha realizzato, con il contributo della Fondazione CARIGE, una serie di interventi di adeguamento che hanno restituito alla città uno spazio conservato ma rinnovato nella funzione. Oggi, infatti, lo spazio della Borsa valori non è più un luogo dove si scambiano le quotazioni bensì un punto d'incontro e di esposizione per eventi legati da un comune denominatore: la cultura del Novecento e quella contemporanea in tutte le sue espressioni.

Domenica 16 Giugno 2024

- 15:00-17:00 Registrazione
- 17:00-17:15 **Saluti della SIBPA – Apertura del Congresso**
[Alberto Diaspro](#)
- 17:15-18:00 **Opening lecture**
[Marie Victoire Neguembor](#)
3D CHROMATIN FOLDING IN THE EYE OF THE “STORM”
- 18:00-19:00 **Plenary lecture**
[Elliot Elson](#)
A CLUSTER MODEL FOR THE TRANSFORMATION OF FIBROBLASTS TO MYOFIBROBLASTS
- 19:00 **WINE AND FOCACCIA**
- 21:00 **Lectio Magistralis pubblica**, *Sala del Maggior Consiglio, Palazzo Ducale*
[Tomaso Poggio](#) (MIT), [Vincent Torre](#) (SISSA), [Massimo Sideri](#) (CdS)
La corsa per l'intelligenza

Lunedì 17 Giugno 2024

- 09:00 **Opening day plenary**
[Annalisa Pastore](#)
The Spy Who Came in from the Cold: understanding the mechanism of cold denaturation
- Sessione di Biofisica Teorica e Computazionale*
Chairs: [Alberto Diaspro](#) (Genova), [Velia Minicozzi](#) (Roma)
- 09:45 **Relazione su invito**
[Giulia Rossi](#)
LIPID MEMBRANE REMODELING AND MEMBRANE FUSION INDUCED BY SYNTHETIC NANOPARTICLES
- 10:15 **Relazione su invito**
[Gianluca Lattanzi](#)
CHALLENGES AND OPPORTUNITIES IN MD SIMULATIONS OF BIOSYSTEMS: FROM PROTEINS TO CELLS?
- 10:45 **Coffee break**
- Comunicazioni orali**
- 11:15-11:30 [Carlo Camilloni](#) “MOLECULAR INSIGHTS INTO THE RESCUE MECHANISM OF AN HERG ACTIVATOR AGAINST SEVERE LQT2 MUTATIONS”
- 11:30-11:45 [Greta Grassmann](#) “COMPUTATIONAL STRATEGIES FOR PROBING PROTEIN INTERACTIONS: PREDICTIVE INSIGHTS INTO INTERACTING RESIDUES”
- 11:45-12:00 [Emiliano De Santis](#) “MANIPULATING PROTEIN ORIENTATION WITH STRONG ELECTRIC FIELDS: MOLECULAR DYNAMICS SIMULATIONS FOR INSIGHTS INTO SINGLE PARTICLE IMAGING AT X-RAY FREE-ELECTRON LASERS”
- 12:00-12:15 [Julia Blandine Bassila](#) “COMPUTATIONAL INVESTIGATIONS FOR THE DESIGN OF A MULTIMODAL INNOVATIVE THERANOSTIC NANOSYSTEM (MITHOS)”
- 12:15-12:30 [Bruno Rizzuti](#) “RATIONAL DESIGN OF DRUGS TO INHIBIT AN ‘IRRATIONAL’ PROTEIN TARGET”

12:30-12:45 **Jennifer Riccio** “MATHEMATICAL MODELING OF KINEMATICS AND EXPERIMENTAL CONTROL OF CYTOKINE EXPRESSION FOR THE CHARACTERIZATION OF PRO- AND ANTI-INFLAMMATORY PATHWAYS IN MACROPHAGES”

12:45-13:00 **Marta Rigoli** “IDENTIFICATION OF CRYPTIC POCKETS VIA BIASED MOLECULAR DYNAMICS”

13:00 **Packed Lunch**

Sessione di Biofisica Applicata

Chairs: **Maria Grazia Ortore** (Ancona), **Cristiano Viappiani** (Parma)

14:00-14:30 **Relazione su invito**

Giovanni Romano

ANTIBACTERIAL PHOTOKILLING: LIGHT-BIOFILM INTERACTION MODELS OF INCREASING COMPLEXITY

14:30-15:00 **Relazione su invito**

Ornella Cavalleri

BIOMOLECULES ON SURFACES: FUNCTIONAL INTERFACES FOR SENSING APPLICATIONS

Comunicazioni orali

15:00-15:15 **Paolo Moretti** “NANOGELES FROM GUANOSINE HYDROGELS: UNVEIL A NEW DRUG DELIVERY SYSTEM”

15:15-15:30 **Giuseppe Sancataldo** “PHASOR-FLIM ANALYSIS OF CELLULOSE AGING PROCESS”

15:30-15:45 **Annalisa D’Arco** “NANOSTRUCTURED TITANIUM DIOXIDE SURFACES FOR AIR-QUALITY MONITORING BY OPTICAL BIOSENSING”

15:45-16:00 **Arianna Bonizzi** “LIPOPROTEIN QUALITY ANALYSIS USING RAMAN SPECTROSCOPY IN CLINICAL SETTING”

16:00-17:15 **Coffee break and POSTER SESSION**

17:15-17:30 **Alessia Pepe** “G-HYDROGEL: FROM TRANSPORT PROPERTIES TO AN INNOVATIVE BIO-INK FOR 3D CELLULAR SCAFFOLD”

17:30-17:45 **Giorgia Puleo** “SPECTROSCOPIC ANALYSIS OF VISIBLE BLUE LIGHT-ACTIVATED PHOTOCATALYSIS ON BACTERIA-LIKE TARGETS”

17:45-18:00 **Alice Piccinini** “A STRUCTURAL INVESTIGATION OF AN INNOVATIVE NANOCONSTRUCT DESIGNED FOR THERANOSTIC AGAINST MULTIPLE MYELOMA”

18:00-18:45 **Closing day plenary**

Giancarlo Ruocco

FROM SUPER-RESOLUTION TO HIGH THROUGHPUT BRILLOUIN MICROSCOPY AT CLN2S

Martedì 18 Giugno 2024

09:00 **Opening day plenary**

Leonel Malacrida

THE PHASOR APPROACH FOR BIOPHYSICAL STUDIES OF CONDENSATES AND MEMBRANES USING DAN PROBES

Sessione di Biofisica Cellulare e dei Tessuti

Chairs: **Ranieri Bizzarri** (Pisa), **Loredana Casalis** (Trieste)

09:45 **Relazione su invito**

Alessandro Podestà

THE MECHANICAL AND ADHESIVE PROPERTIES OF CELLS AND TISSUES IN HEALTH AND DISEASES
INVESTIGATED BY ATOMIC FORCE MICROSCOPY

- 10:15 **Relazione su invito**
Francesca Cella Zancchi
BIOPHYSICAL TOOLS FOR ADVANCED RADIOBIOLOGY IN VITRO
- 10:45 **Coffee break**
- Comunicazioni orali**
- 11:15-11:30 **Silvia Caponi** “CORRELATIVE BRILLOUIN RAMAN”
- 11:30-11:45 **Valentina Notarstefano** “HIGH RESOLUTION FTIR IMAGING OF ORAL TONGUE SQUAMOUS CELL CARCINOMA: NEW INSIGHTS ON TUMOR STAGING”
- 11:45-12:00 **Giorgio Rispoli** “SIGNAL TRANSMISSION AT VESTIBULAR TYPE I HAIR CELLS”
- 12:00-12:15 **Claudia Testi** “PROGRESSIVE ALTERATION OF MURINE BLADDER ELASTICITY IN ACTINIC CYSTITIS DETECTED BY BRILLOUIN MICROSCOPY”
- 12:15-12:30 **Laura Vergani** “STRUCTURAL AND FUNCTIONAL REPROGRAMMING OF ADIPOCYTES DURING MATURATION AND HYPERTROPHY”
- 12:30-12:45 **Samuele Ghignoli** “A BIOPHYSICAL STUDY OF THE DYNAMIC PROPERTIES OF GLUCAGON GRANULES IN A CELLS BY IMSD AND SPT APPROACHES”
- 12:45-13:00 **Davide Panzeri** “PHYSICALLY INSPIRED SCATTERING CORRECTION FOR NON-LINEAR EXCITATION IMAGING OF TISSUES”
- 13:00 **Packed Lunch**
- Sessione di Biofisica alla Nanoscala*
- Chairs: **Antonella Battisti** (Pisa), **Luca Lanzanò** (Catania)
- 14:00-14:30 **Relazione su invito**
Maddalena Collini
SUPER-RESOLUTION THERMAL IMAGING: METHODS AND APPLICATIONS
- 14:30-15:00 **Relazione su invito**
Francesco Cardarelli
ONCE IN A (FLUORESCENCE) LIFETIME: FROM SYNTHETIC IDENTITY TO BIOLOGICAL FUNCTION OF NANOENCAPSULATED DRUGS IN BIOMEDICAL APPLICATIONS
- Comunicazioni orali**
- 15:00-15:15 **Blanca Bruschi** “ADVANCED OPTICAL NANOSCOPY TO HIGHLIGHT THE EFFECTS ON CHROMATIN ORGANIZATION INDUCED BY THE INTERACTION BETWEEN CELLULAR SYSTEMS AND 3D-PRINTED INTELLIGENT SCAFFOLDS”
- 15:15-15:30 **Paolo Bianchini** “MULTIMODAL 2PEF SHG IMAGE SCANNING AND STED MICROSCOPY”
- 15:30-15:45 **Elisabetta Di Franco** “ENHANCING THE RESOLUTION OF IMAGE SCANNING MICROSCOPY (ISM): SPLIT-ISM AND ITS APPLICATION TO THE IMAGING OF CELLULAR STRUCTURES”
- 15:45-16:00 **Simone Civita** “MULTISCALE FLUORESCENCE IMAGING STUDY TO EXPLORE THE RELATIONSHIP BETWEEN PD-L1 AND LIPID RAFTS IN NON-SMALL CELL LUNG CANCER CELLS”
- 16:00-17:15 **Coffee break and POSTER SESSION**
- 17:15-17:30 **Francesco Garzella** “LEVERAGING THE E222Q REPLACEMENT TO GENERATE NOVEL REVERSIBLY SWITCHABLE FLUORESCENT AEQUOREA VICTORIA PROTEINS FOR SUPER-RESOLUTION IMAGING”
- 17:30-17:45 **Sabrina Zappone** “SINGLE-PHOTON MICROSCOPY TO STUDY STRESS GRANULES”

- 17:45-18:00 **Luca Puricelli** “AFM-BASED INVESTIGATION OF CHOLESTEROL IMPACT ON NANOMECHANICAL PROPERTIES OF BIOMIMETIC PLASMA MEMBRANES”
- 18:00-18:45 **Closing day plenary**
Michael Pusch
ENDO-LYSOSOMAL CLC TRANSPORTERS: FROM BIOPHYSICS TO HUMAN NEUROLOGICAL DISEASES
- 18:45-19:45 **Apericena**
- 20:00 **ASSEMBLEA DEI SOCI**

Mercoledì 19 Giugno 2024

09:00 **Opening day plenary**
Giuliano Scarcelli
BRILLOUIN MICROSCOPY FOR CELL AND TISSUE IMAGING

Sessione di Biofisica Molecolare

Chairs: **Rita Carrotta** (Palermo), **Valeria Vetri** (Palermo)

09:45 **Relazione su invito**
Paolo Arosio
INTERPLAY BETWEEN BIOMOLECULAR CONDENSATES AND AMYLOID FORMATION

10:15 **Relazione su invito**
Katharina Landfester
TBA

10:45 **Coffee break**

Comunicazioni orali

11:15-11:30 **Federico Carneri** "THERMODYNAMIC AND KINETIC EFFECTS ON THE ACTIVITY AND SELECTIVITY OF ANTIMICROBIAL PEPTIDES"

11:30-11:45 **Giuseppe De Luca** "MONITORING MOLECULAR ORDERING IN LIQUID-LIQUID PHASE SEPARATION PROCESSES"

11:45-12:00 **Lisa Longo** "INVESTIGATION ON MMACHC-R161Q PATHOLOGICAL MUTANT FROM CBLIC DISEASE, A RARE METABOLIC DISORDER OF VITAMIN B12 METABOLISM"

12:00-12:15 **Matteo Mariangeli** "COMBINING ADVANCED AFM AND FLUORESCENCE MICROSCOPY TO STUDY THE ANTIVIRAL EFFECTS OF HYPERICIN"

12:15-12:30 **Elena Ferraguzzi** "ROLE OF CHOLESTEROL AS LIPID ORDER/FLUIDITY MODULATOR IN BIOMIMETIC PLASMA MEMBRANES"

12:30-12:45 **Caterina Ricci** "IRON DEPOSITION IN FERRITIN CORES"

13:00 **Packed Lunch**

Sessione di Biofisica@SIBPA

Chairs: **Paolo Bianchini** (Genova), **Valentina Mussi** (Roma)

14:00-14:45 **Mid-day plenary**
Paul Wiseman
DECIPHERING THE OSCILLATORY DYNAMICS OF PODOSOMES IN HUMAN DENDRITIC CELLS USING IMAGE CORRELATION METHODS

14:45-15:15 **Relazione su invito**
Barbara Storti
NANOSCALE ORGANIZATION OF PROTEINS AS CRUCIAL MODULATOR OF CELL'S PATHWAYS

Comunicazioni orali

15:15-15:30 **Ester Canepa** "CHOLESTEROL-CONTAINING LIPOSOMES DECORATED WITH AU NANOPARTICLES AS MINIMAL TUNABLE FUSION MACHINERY"

15:30-15:45 **Antonella Sgarbossa** "BLACK PHOSPHORUS NANOMATERIALS FOR NEW THERAPEUTIC STRATEGIES"

- 15:45-16:00 **Lama Zeaiter** “MICROSCOPIC INSIGHTS INTO REARRANGEMENT OF CHROMATIN DOMAINS AND EPIGENETIC DYNAMICS DURING ADIPOCYTE DIFFERENTIATION”
- 16:00-16:15 **Giovanni Di Muccio** “HYDROPHOBIC GATING IN NANOPORES AND ION CHANNELS. FROM LIPID-MEDIATED MODULATION IN BK CHANNEL TO MEMRISTORS DESIGN FOR NEUROMORPHIC APPLICATIONS”
- 16:15-17:15 **Coffee break and POSTER SESSION**
- 17:15-17:30 **Armando Carpaneto** “DIRECT RECORDINGS OF ELECTRON CURRENTS IN PLANT VACUOLES MEDIATED BY CYTOCHROME B561A ACTIVITY”
- 17:30-17:45 **Antonino Natalello** “COMPLEMENTARY AND ORTHOGONAL BIOPHYSICAL APPROACHES DISCLOSE STRUCTURAL AND FUNCTIONAL DIFFERENCES IN HUMAN OSTEOCALCIN AS A FUNCTION OF ITS CARBOXYLATION DEGREE”
- 17:45-18:00 **Elisa Longo** “SEGMENTED FLUORESCENCE CORRELATION SPECTROSCOPY (FCS) ON A COMMERCIAL MICROSCOPE TO STUDY DYNAMICS IN LIVE CELLS”
- 18:00-18:15 **Angela Paterna** “NANOALGOSOMES AS DRUG DELIVERY SYSTEM FOR NEUROPROTECTIVE DRUGS IN *C. elegans* MODEL OF SPINAL MUSCULAR ATROPHY (SMA)”
- 18:15-19:00 **Closing day plenary**
Melody Di Bona
WHEN BIOPHYSICS MEETS BIOCHEMISTRY: THE MECHANISMS OF CANCER CELL MICRONUCLEI COLLAPSE UNVEILED
- 20:00 **CENA SOCIALE**

Giovedì 20 Giugno 2024

- 09:30-10:15 **Opening day plenary**
Giorgio Scita
TISSUE FLUIDIFICATION IN PATHOPHYSIOLOGY

Sessione di Biofisica Teorica e Computazionale (2)

Chairs: **Alberto Diaspro** (Genova), **Velia Minicozzi** (Roma)

Comunicazioni orali

- 10:15-10:30 **Giovanni La Penna** “OPTIMIZING HYDROGEN PRODUCTION IN MICROALGAE”
- 10:30-10:45 **Alessandro Mossa** “A MULTISCALE APPROACH TO STUDY ANGIOTENSIN-CONVERTING ENZYME 2 (ACE2) AND ITS PEPTIDE INHIBITOR DX600”
- 10:45-11:15 **Coffee break**
- 11:15-11:30 **Chiara Innamorati** “DESIGN OF PEPTIDE INHIBITORS OF PROTEIN-PROTEIN INTERACTIONS TARGETED TO SRC HOMOLOG 2 DOMAINS: A COMBINED SIMULATIVE AND SPECTROSCOPIC APPROACH”
- 11:30-11:45 **Stefan Milenkovic** “AN MD SIMULATION-ENHANCED MACHINE LEARNING VIRTUAL SCREENING FOR ACCUMULATION OF ANTIMICROBIALS”
- 11:45-12:00 **Martina Nicoletti** “MAGNETIC FIELD OF CARDIAC CELL CULTURES: A THEORETICAL-COMPUTATIONAL STUDY”
- 11:45-13:00 **Cerimonia Premi**
Chairs: **Alberto Diaspro** (Genova), **Settimo Termini** (Palermo)
- 12:00-12:15 **Premio “Antonio Borsellino”**
- 12:15-12:30 **Premio “Gianfranco Menestrina”**

12:30-12:45 **Premio** *“Marina Diana Mercurio”*
GIORGIO PARISI

12:45-13:00 **Chiusura del Congresso.**

Saluti di **Mauro Dalla Serra**, Direttore IBF-CNR. ANNUNCIO DI EBSA 2025.

Posters

- P1. **Manuela Maria Alampi.** A photoactive supramolecular complex targeting PD-L1 reveals a weak correlation between photoactivation efficiency and receptor expression levels in non-small-cell lung cancer tumor models.
- P2. **Eleonora Alfinito.** Greed and altruism: how quorum sensing mediates between these two behaviors.
- P3. **Laura Andolfi.** The impact of external mechanical cues on the cellular localization and the activation of piezo 2 channels.
- P4. **Elena Angeli.** Super-resolution fluorescence microscopy coupled with a doughnut-shaped two-photon excitation beam to study DNA organization in the cell nucleus.
- P5. **Sara Anselmo.** Unveiling protein behavior in confined environments: exploring pH-induced aggregation dynamics.
- P6. **Gaytri Arya.** Simulation based analysis of type-0 non-degenerate PPKTP crystal for SPDC process.
- P7. **Francesca Baldini.** Exploring chromatin and epigenome alterations in neuroblastoma transformation.
- P8. **Alessio Bartocci.** From protein-ligand interaction to protein regulation: insights from molecular dynamics simulations.
- P9. **Antonella Battisti.** Lab-on-chip for sustainable olive value chain [LOVE]: development of a lab-on-chip for detecting polyphenolic compounds in olive and its derivatives.
- P10. **Virginia Bazzurro.** Fluorescence lifetime combined with stimulated emission depletion microscopy for investigating GABA A receptor subunits' response to antiseecretory factor.
- P11. **Lucia Bellanova.** Sensing nitric oxide with a fluorescent protein.
- P12. **Anna Boccaccio.** Investigating TMEM16E mutations implicated in muscular dystrophy and GDD skeletal dysplasia.
- P13. **Davide Bochicchio.** Towards the design of fusogenic nanoparticles: physical determinants of nanoparticle-induced stalk formation.
- P14. **Mario Bortolozzi.** Towards personalized medicine: investigating Parkinson's disease by patient-derived midbrain organoids.
- P15. **Irene Cadenelli.** Shedding light on beta-amyloid aggregation by means of atomistic and coarse-grained molecular dynamics..
- P16. **Paolo Calligari.** In-silico exploration of the allosteric mechanism in multi-domain proteins: the case of tyrosine phosphatase SHP2..
- P17. **Sonia Cambiaso.** In silico study of chitosan interactions with lipid bilayers.
- P18. **Ester Canepa.** Cholesterol-containing liposomes decorated with Au nanoparticles as minimal tunable fusion machinery.
- P19. **Paolo Canepa.** Biomimetic hybrid vesicles for cancer targeting.
- P20. **Rita Carrotta.** Anti-amyloid and anti-oxidative properties of moringa oleifera extracts as strategic phytotherapy for Alzheimer disease.
- P21. **Paolo Cocomazzi.** Targeting BIR-mediated onco-PPIs: rational design of NF- κ B modulators.
- P22. **Pauline Conigliaro.** Commercial SERS substrates for the detection of biological molecules.
- P23. **Maria Antonietta Coppola.** New insights into the role of CLC-6 and CLC-7 in the late endosomes and lysosomes: a functional in vitro study.
- P24. **Sara Corti.** Imaging chromatin compaction in cells of whole planarians: a step towards the characterization of epigenetic memory in lower eukaryotes.
- P25. **Flavio Costa.** Effects of the membrane's composition on the berberine permeability in liposomes.
- P26. **Sofia Cristiani.** The subtle role of polyhomeotic polycomb proteins in determining biomolecular condensates in the cell nucleus.
- P27. **Martina De Felice.** Super-resolution storm microscopy as a new tool to study extracellular vesicles.
- P28. **Pietro Delcanale.** Aptamer-protein binding quantified by fluorescence correlation spectroscopy.
- P29. **Daniele Dell'Orco.** Liposomes, protein delivery and controlled modulation of the phototransduction cascade.
- P30. **Emiliano De Santis.** The eupraxia photon beams: ultra-bright light pulses for imaging and spectroscopy.
- P31. **Fausta Desantis.** Computational evidence of a misfolding event in an aggregation-prone light chain in α 1 amyloidosis.
- P32. **Lorenzo Di Rienzo.** Computational modulation of compatibility between biomolecular interfaces: the importance in protein design.
- P33. **Alberto Diaspro.** The Minflux revolution of minimal photon fluxes and polarized light label-free approaches to study complex biomolecular organizations in cells at the nanoscale.
- P34. **Loretta Ferrera.** In vitro characterization of a SCN2A variant causing early infantile onset encephalopathy using heterologous cell expression and neurons from IPS cells.
- P35. **Margherita Festa.** Preliminary data on human slc45a1 characterization.
- P36. **Anna Fricano.** The effect of gold ions on the formation of Beta-Lactoglobulin supramolecular assemblies.
- P37. **Paola Gavazzo.** Biophysical and pharmacological aspects of Familial Hemiplegic Migraine 3 (FHM3) are recognizable in dissociated cultures from cortex of knock-in FHM3 mice.
- P38. **Daniela Giacomazza.** Agarose-guar gum-based edible coating to extend the strawberry shelf-life.
- P39. **Beatrice Leonardini.** Exploring the interplay of gold nanoparticle size and lipid membrane curvature in modulating membrane fusion.

- P40. **Lisa Longo.** Investigation on MMACHC-R161Q pathological mutant from CBL disease, a rare metabolic disorder of vitamin B12 metabolism.
- P41. **Nicole Luchetti.** A structural and computational analysis of Caenorhabditis elegans cyclic nucleotide-activated channel TAX-4.
- P42. **Tiziana Mancini.** High sensitivity and specificity monitoring of gaseous VOCs coupling a multipass gas cell setup with FTIR spectroscopy and machine learning.
- P43. **Eleonora Mari.** From waste to resource: hop extract and its bioactive compounds can inhibit amyloid aggregation
- P44. **Vincenzo Mascoli.** Towards the real-time observation and manipulation of biological processes: from single molecules to whole cells.
- P45. **Irene Mazza.** Functional characterization of the recombinant human riboflavin transporter 2 (SLC52A2).
- P46. **Velia Minicozzi** Characterizing cu(i)- and cu(ii)-amyloid beta peptide complexes: a computational and experimental approach.
- P47. **Mattia Miotto.** A size-dependent division strategy accounts for leukemia cell size heterogeneity.
- P48. **Rebecca Mordini.** Super-resolution microscopy highlights cells behaviour on polymer nanofibers.
- P49. **Miguel Moreira.** Targeting the RhoA-ROCK signaling pathway for treatment of early-stage melanoma tumors.
- P50. **Alberto Morgantini.** Super-resolution storm microscopy of printed proteins.
- P51. **Rosanna Mosetti.** Infrared spectroscopy investigation of SARS-CoV-2 spike protein Domains.
- P52. **Alessia Muroni.** Human cytochrome C natural variants: studying the membrane binding properties of G41S and Y48H by fluorescence energy transfer and molecular dynamics.
- P53. **Andrea Mussini.** Concanavalin A delivers a photoactive protein to the bacterial wall.
- P54. **Antonino Natalello.** Spectroscopic methods enabling the circular economy: investigating novel applications for dairy and textile by-products from Italian supply chains.
- P55. **Benedetta Noferi.** Imaging cytoskeletal networks: From quantitative fluorescence to AI-assisted super-resolution microscopy.
- P56. **Davide Odino.** A nanoscale exploration of the aggregation of partially labelled polypeptides via AFM-STED correlative microscopy.
- P57. **Vittorio Parenti.** A quantitative method by super-resolution microscopy to characterize early DNA-damage and repair induced by flash radiotherapy.
- P58. **Alessandra Anna Passeri.** Correlative Raman-Brillouin spectroscopy: investigating fixation effects on cells.
- P59. **Alessia Pepe.** Lipid nanoparticulate systems characterization through x-ray scattering techniques.
- P60. **Alessandra Picollo.** HSP70 inhibitors as therapeutic target for CLCS genetic diseases.
- P61. **Valentina Pisano.** Raman spectroscopy study of x-rays irradiated neuroblastoma (sh-sy5y) cells.
- P62. **Vera Plakhova.** Nutraneuro – functional evaluation of nutraceutical neuroprotection of neuronal ion channels in neurodegenerative diseases: a putative molecular target for neuroresilience.
- P63. **Vera Plakhova.** Early electrophysiological study of the effects of curcumin on ion channels of motoneuron-derived cells modelling SBMA.
- P64. **Eugenia Polverini.** Effects of C282Y mutation in HFE protein structure and interactions, investigated by MD simulations: implication in hereditary hemochromatosis.
- P65. **Estella Rao.** A biotechnological approach for loading macromolecules into extracellular vesicles.
- P66. **Giorgio Rispoli.** Chemoresistive gas sensors for cancer detection.
- P67. **Giorgio Rispoli.** The voltage-dependent ionic channels of the zebrafish retinal cones resemble the ones of vestibular hair cells.
- P68. **S.M.C. Rotondi.** Exploiting AFM as a nanolithographic tool: designing DNA patches for parallel detection of oligonucleotide sequences.
- P69. **Alberto Russo.** Engineering a ROS-gated K⁺ channel for the treatment of neuropathic pain.
- P70. **Marco Salerno.** Miniflux nanoscopy: preliminary results and perspectives at SEE LIFE infrastructure.
- P71. **Silvia Scalisi.** Unraveling the origin and evolution of oncogene-driven DNA damage: insights from single-cell imaging.
- P72. **Atiyeh Sadat Sharifzadeh.** An HCN4 specific nanobody for the modulation of pathogenic channels.
- P73. **Andrea Spitaleri.** Unveiling phenylalanine–membrane interaction dynamics: insights from molecular dynamics simulations.
- P74. **Ana Svetić.** Nanoindentation as a method for detecting biomechanical properties of 2d cell models and hydrogels.
- P75. **Francesco Tavanti.** Revealing the complex structure of NG2 proteoglycan through multi-computational approaches.
- P76. **Abraham Tettey-Matey.** Investigation of heterodimeric CLC-3 / CLC-4 endosomal chloride / proton antiporters.
- P77. **Francesco Troisi.** Effect of mechanical stress and hydrophobic interfaces on protein nanofibrils self-assembly.
- P78. **Valeria Vetri.** Deciphering the interactions in Liquid-Liquid Phase Separation: insights from protein condensation.
- P79. **Carlotta Viappiani.** Molecular insights into nitric oxide sensitivity of fluorescent proteins.
- P80. **Robert Wolff.** Increased Genetic Noise and Shannon Entropy due to Monoallelic Gene Expression in Developing Cells.
- P81. **Davide Zamboni.** Transmembrane channel-like protein 1 (TMC1) in physiological and deafness-associated states: insights from molecular dynamics and fluorescence microscopy.
- P82. **Hawraa Zbeeb.** Lipid lowering and antioxidant activities of a pool of natural bioactive compounds: the role of PPARS investigated by expression and molecular docking analysis.

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