POSTER SESSION INDEX

Date: Tuesday, 21st June 2022
Time: 15:30 - 16:30

8 th International
IBERIAN BIOPHYSICS CONGRESS

POSTER INDEX

Nº	Surname 1	Surname 2	Name	Title	Room
P1. New and Notable Biophysics - High Impact work from Spain and Portugal (1)					
P1.1	De Sancho	Sánchez	David	Liquid-liquid phase separation from composition alone	Chillida
P2. Biophysics and Biomedicine (Biophysics and Health) (25)					
P2.1	Lopes	Sousa	Catarina	Evaluation of morphological and elastic changes on erythrocytes and γ' fibrinogen as possible predictors of survival ir	Chillida
P2.2	Sen	Martín	Laura	The R502W mutation in murine cardiac myosin binding protein C leads to pathogenic myocardial remodeling in the a	Chillida
P2.3	Plaza	García-Abadillo	Ismael	Single-molecule characterization of the DNA unwinding mechanism of the human mitochondrial DNA helicase	Chillida
P2.4	Silva	Rojas	Roberto	Examining titin mechanosensing and mechanical role in skeletal muscle	Chillida
P2.5	Pimpão	Pimpão	Catarina	Gold compounds inhibition of aquaporin-3 permeability with impact on melanoma cell migration	Chillida
P2.6	Guimaré	Ortiz	José Antonio	Human saliva biophysics and the potential formation of infective aerosols: a protein and lipid point of view	Chillida
P2.7	Losada	Oliva	Paula	Pulmonary surfactant biophysics and surfactant protein SP-B levels in COVID-19-related Acute Respiratory Distress Sy	Chillida
P2.8	Xu	-	You	Biophysical effects of lipidoid-polymer hybrid nanoparticles on pulmonary surfactant	Chillida
P2.9	Torralba	Iturbe	Johana	Molecular recognition of the pan-neutralizing HIV-1 MPER epitope reconstituted in membranes	Chillida
P2.10	Perini	-	Deborah Aurora	Molecular insights on the interaction between polystyrene nanoparticles and lipid membrane mimetics	Chillida
P2.11	Gameiro	-	Paula	Antimicrobial peptides and ionic liquids as a strategy to fight bacterial infections: microbiological and biophysical stuc	Chillida
P2.12	Ferreira	-	Mariana	Fluoroquinolone metalloantibiotics: a promising strategy to fight Staphylococcus aureus	Chillida
P2.13	Coluzza	-	Iván	Proteins as inspiration for smart materials	Chillida
P2.14	De Miguel	Pickers	Patricia	Hydrogel-loaded lipid vesicles for drug vehiculation and controlled delivery	Chillida
P2.15	Medina	Carmona	Encarnación	Structure-based discovery and in vitro validation of selective inhibitors of Chloride Intracellular Channel 4 protein	Chillida
P2.16	Luzón-Hidalgo		Raquel	Bacteriophage adaptation through phenotypic mutations	Chillida
P2.17	Branda	-	María Marta	Computational analysis of the Immunogenic regions at the TrV capsid	Chillida
P2.18	Parra	-	Marisa	Identification of Tsg101-UEV Ligands of Interest as Broad-Spectrum Antivirals	Chillida
P2.19	Dols	Pérez	Aurora	Mechanics of soft polymeric nanoparticles: effect of functionalization and loading	Chillida
P2.20	Almeida	-	Zaida L.	Clearance of amyloid fibrils in amyloidosis: from in silico approaches to in vitro activity	Chillida
P2.21	Ortega	Quintanilla	Gabriel	Engineering Biomolecular Receptors to Develop Biosensors for Personalized Medicine	Chillida
P2.22	Pires	Lages	Cristiana	Validation of the re-use of Caco-2 monolayers for multiple permeability assays	Chillida
P2.23	Cano-Muñoz	-	Mario	Disulfide-bond stabilization of gp41-mimetic proteins strongly increase target affinity and anti-HIV activity	Chillida
P2.24	Valério	-	Mariana	Parainfluenza Fusion Peptide Promotes Membrane Fusion by Assembling into Oligomeric Porelike Structures	Chillida
P2.25	Velez	Tirado	Marisela	Electrochemical Characterization of Mammalian Respiratory Complex I and III in Intact Mitochondrial Membranes	Chillida
P3. Protein Structure, Dynamics and Function (34)					
P3.1	Ortiz	Mateu	Juan	SARS-CoV-2 Spike Protein Trimer Formation In Mammalian Cells	Chillida
P3.2	Bañuelos	Rodríguez	Sonia	Capturing the moment: Insights into the role of a flexible domain in the DNA repair protein APE1	Chillida
P3.3	Medina	Trullenque	Milagros	Delivery of FMN from Riboflavin kinase to Pyridoxine 5'-phosphate oxidase	Chillida
P3.4	Maestro-López	-	Moisés	Biochemical and Structural characterization of a complex involved in chaperone-assisted UPS degradation	Chillida

P3.5	Cuéllar	Pérez	Jorge	The Hsp40 DnaJA2 dimer self-associates into ordered tubular oligomers through defined inter-domain interactions	Chillida
P3.6	Martínez	Martín	Inés	Basal oxidation of conserved cysteines modulates cardiac titin stiffness and dynamics	Chillida
P3.7	Ortiz	Rodríguez	María	Towards the mechano-chemical characterization of Pfh1 helicase activity	Chillida
P3.8	Insausti	González	Sara	Grafting synthetic aromatic compounds improves the potency of a pan-neutralizing HIV antibody	Chillida
P3.9	Suay-Corredera	-	Carmen	A test of statistical significance to compare distributions of protein unfolding forces obtained by Atomic Force Spectr	Chillida
P3.10	Pujols	Pujol	Jordi	MIA40 bypasses the folding constraints imposed by TRIAP1 function	Chillida
P3.11	Pérez	Jover	Isabel	Self-regulation of Drp1 function in membrane fission	Chillida
P3.12	Oroz	Garde	Francisco Javier	Metamorphism in a prion-like domain determines chaperone recognition	Chillida
P3.13	Morillo	Melero	Izaskun	Accretion of aromaticity through chemical modification improves the functional profile of a broadly neutralizing HIV-	Chillida
P3.14	López-Alonso	-	Jorge Pedro	The Basque Resource for Electron Microscopy	Chillida
P3.15	García	Porras	Miguel	Differential effects of synthetic aromatic engraftment on the polyreactivity and antiviral potency of HIV-1 antibodies	Chillida
P3.16	Laurents	Schayot	Douglas	NMR Studies Pave the Way for Polyproline II Helices as the Next LEGO® for Protein Design	Chillida
P3.17	Blanco	Gutiérrez	Francisco	Structural analysis of the black-legged tick saliva protein Salp15	Chillida
P3.18	Moran	Lalangui	Mishelle	Pulmonary surfactant homeostasis: SP-C and its role in membrane fission and alveolar internalization	Chillida
P3.19	Altuna	Álvarez	Jon	The P. aeruginosa type VI secretion system effector Tse5 forms ion-selective membrane pores that disrupt the memb	Chillida
P3.20	Arjona	Soriano	Olga	From monomer to dimer: the significance of apoptosis-inducing factor dimerization in its interaction with CHCHD4	Chillida
P3.21	Behbahanipour	-	Molood	Bioengineered self-assembling nanofibrils for the capture and neutralization of SARS-CoV-2	Chillida
P3.22	Montero	Segovia	Fernando J.	Exploring the druggability of the ALIX-V domain for the identification of broad-spectrum antivirals	Chillida
P3.23	Gamiz-Arco	-	Gloria	Combining Ancestral Reconstruction with Folding-Landscape Simulations to Engineer Heterologous Protein Expressio	Chillida
P3.24	Gutiérrez	Rus	Luis Ignacio	Heme binding to an ancestral TIM-barrel reveals a plausible general mechanism for the emergence of primordial enz	Chillida
P3.25	Branda	-	María Marta	Modelization of the Dimeric Rhodopsin R135L Mutant-Transducin Complex can Account for Spurious Signals Occurrir	Chillida
P3.26	Giraldo	Ruiz	Lucía	Fascin allosteric inhibitors as new antimetastatic drugs	Chillida
P3.27	Pacheco	García	Juan Luis	Understanding the phosphorylation effects in the antioxidant NQO1 enzyme	Chillida
P3.28	Méndez	Guzmán	Iván	Structural insights into the molecular organization of the Retriever complex	Chillida
P3.29	Viguera	Rincón	Ana Rosa	VLP in vitro assembly from E. coli expressed TrV capsid proteins	Chillida
P3.30	Branda	-	María Marta	A Molecular Dynamics Simulation Study of putative ions in CrPV capsid	Chillida
P3.31	Ventura	Zamora	Salvador	Alpha-Helical peptides to target alpha-synuclein toxic species with nanomolar affinity	Chillida
P3.32	Pinheiro	García	Francisca	Towards the development of a second-generation transthyretin kinetic stabilizer	Chillida
P3.33	Marcos	Ramos	João	Poly(ethylene glycol) prevents unfolded myoglobin to aggregate	Chillida
P3.34	Cuervo	-	Natalia	RECONSTITUTION OF CHAPERONE COMPLEXES INVOLVED IN THE ASSEMBLY AND ACTIVATION OF mTOR COMPLEXES	Chillida
P4. Nucleic Acids and Supramolecular Complexes (9)					
P4.1	Luengo-Márquez	-	Juan	Force-dependent mechanical properties of nucleic acids	Chillida
P4.2	Abascal-Palacios	-	Guillermo	Structural basis of Ty3 retrotransposon integration at RNA Polymerase III-transcribed genes	Chillida
P4.3	Rodríguez	Pulido	Carlos	Pulling on individual Influenza A genomes: Elastic properties of structured single-stranded RNA molecules	Chillida
P4.4	Balaguer	Pérez	Francisco	Single molecule magnetic tweezers experiments to study C. glabrata Cdc13 interactions with telomeric DNA sequenc	Chillida
P4.5	Roque	Afonso	Ana Cecilia	Designed ionic liquid-based soft materials for artificial olfaction	Chillida
P4.6	González	Rodríguez	Nayim	Molecular architecture and oligomerization of C. glabrata Cdc13 dictates its binding to telomeric DNA	Chillida
P4.7	Martín	Cuevas	Eva	Structural analysis of single-stranded RNA using Atomic Force Microscopy	Chillida
P4.8	Dobiezynska	Anna	Anna	Single-molecule studies of DNA-end tethering by human CtIP	Chillida
P4.9	Marin-Baquero	-	Mikel	Towards correlative AFM-TIRF microscopy to study DNA-protein interactions	Chillida
P5. Cell and Tissue Biophysics (16)					
P5.1	Dumitru	-	Andra Cristina	Insights into the cell surface machinery: High resolution imaging and nanomechanical mapping of living cells	Chillida
P5.2	Pricolo	-	María Rosaria	Mechanical modulation of titin in living cardiomyocytes	Chillida

P5.3	López-Unzu	-	Miguel Ángel	Unraveling the implication of defective titin mechanosensing in cardiac function	Chillida
P5.4	Jesús	Henriques	Catarina S.H.	Lipid Metabolic Adaptations to Mesenchymal Stem Cells Osteogenesis and Aging by 1H NMR Metabolomics	Chillida
P5.5	Bengoetxea	González	Guillermo	Analysis of cellular reorganization and mechanics of wound healing	Chillida
P5.6	Rogalla	-	Svana	Tissue mechanics and the role of the cytoskeleton during wound repair	Chillida
P5.7	Azuaje	Hualde	Enrique	Applications of CELLSTUDIO: Micropatterning of Cells and Microbeads with High Control of Cell-Microenvironment In	Chillida
P5.8	Pulgarín	Alfaro	Marta	Role of caveolin-1 in extracellular matrix deposition and remodelling upon myocardial infarction	Chillida
P5.9	Zamora-Carreras	-	Héctor	A novel framework to characterize nuclear compaction gradients between lamina layer and chromatin	Chillida
P5.10	Masó	Orriols	Sergi	The role of glycosylations on integrin α5β1 diffusion in the plasma membrane	Chillida
P5.11	Trubuil	Trubuil	Elise	Control of epidermal stretching in Drosophila embryos	Chillida
P5.12	Gonçalves	Carneiro	Tatiana J.	In vivo 1H NMR metabolomics: Triple-Negative Breast Cancer response to anticancer drug Pd2(Spermine)	Chillida
P5.13	Backová	-	Lenka	Deep learning-based image analysis and cell behaviour prediction of multicellular biological systems	Chillida
P5.14	González	Gómez	Itziar	Dynamics of individual cancer cells under their exposure to mechanical external forces	Chillida
P5.15	Silva	-	Patricia	Implications of aquaporin-3 and aquaporin-5 on pancreatic cancer cell biomechanics and cell-cell adhesion	Chillida
P5.16	Travasso	-	Rui	Effect of Anti-VEGF Presentation in Controlling Vascular Development	Chillida
P6. Membrane Structure and Function (16)					
P6.1	Collada	Marugán	Ainhoa	Structural characterization of pulmonary surfactant at the air-liquid interface by neutron reflectometry	Axular
P6.2	Merino	Arrese	Andrea	Immune synapse protein dynamics and membrane mechanics in functionalized surfaces	Axular
P6.3	Sot	Sanz	Jesús	LIQUID-CRYSTALLINE, LIQUID-ORDERED, RIPPLED AND GEL LIPID BILAYER PHASES AS OBSERVED WITH NILE RED FLUC	Axular
P6.4	Almendro-Vedia	-	Víctor G.	Acridine orange derivatives role as membrane fusion triggers: mechanism approach using MARTINI	Axular
P6.5	Ballesteros	Rivero	Uxue	LC3C contributes to autophagosome elongation/fusion in autophagy phenomena	Axular
P6.6	Iriondo	Nagore	Marina	E3 autophagy complex and LC3/GABARAP proteins in autophagosome generation	Axular
P6.7	González	Ramírez	Emilio José	Sphingolipid interactions in model membrane systems (lipid bilayers) containing cholesterol	Axular
P6.8	Valdivieso	González	David	Active sorting of ATP synthase in curved membranes	Axular
P6.9	Aboy	Pardal	Mª Carmen Manuela	Plasma membrane remodelling facilitates adipocyte expansion and mechanical adaptability	Axular
P6.10	Makowski	Lukasik	Marcin	Molecular dynamics studies on the impact of truncated lipids in bioenergetic membrane dynamics	Axular
P6.11	Carrillo	Godoy	Nuria	Lateral diffusion of lipids in supported bilayers by Image Correlation Spectroscopy	Axular
P6.12	Lafargue	-	Elodie	MurG-mediated dynamical structuring of model lipid membrane	Axular
P6.13	Landeta	Díaz	Olatz	Cardiolipin content modulates the BCL2 interactome and BCL2-related pores	Axular
P6.14	Moreno	Moreno	María João	Effect of dipole moment on amphiphile solubility and partition into lo and ld lipid bilayers	Axular
P6.15	Machado	Cordeiro	Margarida	Analysis of different methods to calculate permeability coefficients	Axular
P6.16	Oliveira	Da Costa	Alexandre	Interaction of contrast agents with biomembranes	Axular
P7. Systems Biophysics (1)					
P7.1	Salvador	-	Armindo	How far can hydrogen peroxide and superoxide travel in the microcirculation?	Axular
P8. Biological Physics (10)					
P8.1	Gil	Redondo	Juan Carlos	AFM meets biology: investigating the mechanical properties of biological materials	Axular
P8.2	Velázquez	Carreras	Diana	Towards a new modular polyprotein system compatible with single-molecule force spectroscopy by atomic force mic	Axular
P8.3	Vera	Gómez	Andrés Manuel	Single-molecule biophysics of the cohesin-dockerin interaction: binding heterogeneity and regulation by isomerizatio	Axular
P8.4	Aguilella	Fernández	Vicente	Neutral polymers partial exclusion near charged membranes	Axular
P8.5	Alcaraz	González	Antonio	Single-molecule conformational dynamics of viroporin ion channels regulated by lipid-protein interactions	Axular
P8.6	Tinao	Nieto	Berta	Selective membrane permeation: A route to control the phase behavior of aqueous compartments within vesicles	Axular
P8.7	Magrinya	Aguilo	Paula	Membrane mechanics as a regulator of motion in externally-driven spinning vesicles	Axular
P8.8	Campusano	Cortés	Richard	Bacillus subtilis swimming motility in structured media	Axular

P8.9	Calero	-	Macarena	Mechanical properties of red blood cell membranes	Axular
P8.10	López	Menéndez	Horacio	Identification of the active mechanics of the actomyosin cortex during cell division by optical flow	Axular
P9. Receptors, Channels, and Transporters (5)					
P9.1	Muguruza	Montero	Arantza	Calmodulin is critical for folding of the Kv7.2 calcium responsive domain as the nascent peptide exits the ribosome	Axular
P9.2	Gómez	Lucas	Lidia	Functional roles of the two lytic domains existing in the FMDV 2B viroporin	Axular
P9.3	García-García	-	María	Mechanical control of nuclear import by Importin-7 is regulated by its dominant cargo YAP	Axular
P9.4	Alvero	González	Laidy Maidel	Kinetic and thermodynamic analysis of ion transport in ion channels and nanopores	Axular
P9.5	Sotodosos	Alonso	Laura	Cell tension controlling pathways and nutrient availability regulate plasma membrane ATP synthase trafficking	Axular