Addendum and Late Poster Listings

EXHIBITS

Exhibit Changes not listed in the Daily Schedule

EXHIBITOR PRESENTATION CHANGES

Room 103C: Sunday, February 11

*Additional Speaker and Summary

1:30 PM – 3:00 PM

Carl Zeiss Microscopy LLC

ZEISS Lattice SIM Family - Versatile Superresolution Across Scales

The new ZEISS Lattice SIM Family is designed to offer researchers the most versatile solution for meeting their live cell and superresolution imaging needs. Superresolution microscopy has seen an explosive rise in popularity over the past decade, with techniques like SMLM and SIM granting researchers unparalleled access to structural details and molecular interactions. The Lattice SIM Family builds off the success and renowned superresolution and live cell imaging capabilities of ZEISS Elyra 7 by offering a suite of three instruments: ZEISS Lattice SIM 3, ZEISS Lattice SIM 5, and ZEISS Elyra 7 with Lattice SIM. ZEISS Lattice SIM 3 targets fast optical sectioning of evolving organisms and tissues; ZEISS Lattice SIM 5 focuses on observing the vibrant sub-organelle network of life; and ZEISS Elyra 7 with Lattice SIM is a complete superresolution system for examining life down to the molecular details. Together, the new ZEISS Lattice SIM Family offers flexibility, speed, and gentle superresolution to meet the needs of researchers investigating biological processes across scales.

Speaker
Peter Favreau, PhD, Product Marketing Manager, Lattice Line Microscopes, Carl Zeiss Microscopy LLC

Room 103C: Monday, February 12

*Additional Presentation & Summary

1:30 PM – 3:00 PM

Oxford Instruments

Correlative Microscopy with Oxford Instruments for Advancing Biophysical Research

Oxford Instruments provides a suite of leading-edge analytical techniques for multi-modal and correlative microscopy. Correlative Microscopy enables life science researchers to combine multiple imaging techniques on single samples, including light microscopy, electron microscopy, atomic force microscopy (AFM), and Raman microscopy, to obtain highly detailed and quantitative information. Our Relate software solution facilitates correlation of quantitative image data from all the above techniques and more, provides visualization of multi-layered data in 2D and 3D, and enables greater integration of your correlative analyses. In this workshop, you will have the opportunity to learn more about each of the following techniques and how you can use Relate to perform correlative analysis on the data acquired:

Speaker: *Pedro Machado, Product Manager, Oxford Instruments Nano-Analysis*

- ***Scanning Electron Microscopy-Energy Dispersive Spectroscopy (SEM-EDS)*** – For the analysis of cells, tissues and nanoparticles, Energy Dispersive Spectroscopy (EDS) in conjunction with SEM is used for mapping and measuring the elements present in the samples and generating multi-color ultrastructural data. This approach enables the complementation of ultrastructural information with chemical composition, localization and quantification of the elements present in your sample.

- ***Scanning Electron Microscopy-Backscattered Electron and X-Ray (BEX) Analysis*** – BEX is a new technique, recently developed to be used with SEM which acquires data simultaneously from both Backscattered Electron (BSE) sensors and X-ray sensors. BEX combines the topographic, crystallographic, atomic number and elemental information in an immediate visual output while one navigates around a sample.

Speaker: *Sophia Hohlbauch, Staff Biological Applications Scientist, Oxford Instruments Asylum Research*

- ***Atomic Force Microscopy (AFM)*** – In Biophysical research, AFM is a powerful analytical tool for the structural and nanomechanical characterization of a wide range of samples at the nanometer scale. By leveraging the high-speed capabilities of the Cypher VRS, Scientists can access the temporal resolution to capture real-time dynamics which is necessary to solve problems in pharmaceutical research and drug development. Capitalizing on the patented Quadrature Phase Differential interferometry (QPDI) detector in the Vero AFM, researchers benefit from improved sensitivity and reduced noise which results in accurate and repeatable measurements.

Speaker: *Wei Liu, Applications Specialist, Oxford Instruments WITec*

- **Raman Microscopy** – Raman Microscopy has rapidly gained popularity among Biophysical Researchers as a powerful, non-invasive imaging technique that can be used to characterize proteins, nucleic acids, oligosaccharides, and tissues. The alpha300 R Confocal Raman Imaging System sets the benchmark in terms of flexibility, sensitivity, speed, and performance.

This workshop will provide you with an exciting opportunity to learn about SEM, AFM, and Raman microscopy and how you can use Relate to combine this data and gain extremely valuable insights into complex biological samples.

ADDITIONAL COMPANIES

Community for Rigor — 205

3700 Hamilton Walk, B404
Philadelphia, PA 19104
c4r.io

NEW 2024

Community for Rigor is an NIH-funded initiative that makes web-based educational materials to teach the principles of rigorous science.

Tucsen Photonics Co Ltd — 311

#5 Wanwushe Smart Industrial Park
No. 2 Yangqi Branch Road
Gaishan Town, Fuzhou, 350001
Fuji
www.tucsen.com

NEW 2024

We represent Tucsen, a camera technology company which focuses on scientific imaging and challenging inspection. We provide high-performance sCMOS and CMOS cameras for researchers in the laboratory and we also provide camera design services for manufacturers of scientific optical instruments and industrial inspection equipment.

SUNDAY LATE POSTERS

1:45 PM–3:45 PM, EXHIBIT HALL AB

All abstracts are available through the desktop planner and mobile app.

Posters should be mounted beginning at 6:00 PM on Saturday and removed by 5:30 PM on Sunday evening. Posters will be on view until 10:00 PM the night before presentation. Board numbers indicate where boards are located in the Exhibit Hall.

Late posters are to be placed on boards beginning with "LB".
These boards are located on the right-hand side of the Exhibit Hall.

ODD-NUMBERED BOARDS 1:45 PM–2:45 PM | EVEN-NUMBERED BOARDS 2:45 PM–3:45 PM

Board Numbers	Category
Board LB1 - LB9	Protein Structure and Conformation I
Board LB10 - LB24	Protein Structure, Prediction, and Design
Board LB25 - LB35	Intrinsically Disordered Proteins
Board LB36 - LB39	DNA Replication, Recombination, and Repair
Board LB40 - LB43	RNA Structure and Dynamics
Board LB44 - LB47	Membrane Physical Chemistry
Board LB48 - LB51	Membrane Structure
Board LB52 - LB59	General Protein-Lipid Interactions
Board LB60 - LB65	Membrane Receptors and Signal Transduction
Board LB66 - LB66	Intracellular Calcium Channels and Calcium Sparks and Waves
Board LB67 - LB67	Intracellular Organelle Dynamics
Board LB68 - LB70	Voltage-Gated Na Channels
Board LB71 - LB72	Voltage-Gated Ca Channels
Board LB73 - LB75	Membrane Pumps, Transporters, and Exchangers
Board LB76 - LB77	Skeletal Muscle Mechanics, Structure, and Regulation
Board LB78 - LB78	Smooth Muscle and Cardiac Muscle Regulation
Board LB79 - LB80	Kinesins, Dyneins, and Other Microtubule-based Motors
Board LB81 - LB82	Cytoskeletal-based Intracellular Transport
Board LB83 - LB83	Diffraction and Scattering Techniques
Board LB84 - LB94	Molecular Dynamics
Board LB95 - LB96	Optical Spectroscopy: CD, UV-VIS, Vibrational, Fluorescence
Board LB97 - LB99	Force Spectroscopy and Scanning Probe Microscopy
Board LB100 - LB102	Micro- and Nanotechnology

It is the responsibility of the poster presenters to remove print materials from the board after their presentations. Please do not leave materials or belongings under poster boards or in the poster area. Posters will not be collected or stored for pick-up at a later time. The Biophysical Society is not responsible for any articles left in the poster area.

Sunday Late Posters (Boards LB1 - LB102)

Protein Structure and Conformation I (Boards LB1 - LB9)

L3149-Pos Board LB1
EVALUATION AND REFINEMENT OF CYCLIC PEPTIDE FOLDING LANDSCAPES AGAINST NMR OBSERVABLES USING MOLECULAR SIMULATION AND BAYESIAN INFERENCE OF CONFORMATIONAL POPULATIONS. **Thi Dung Nguyen**, Robert Raddi, Vincent Voelz

L3150-Pos Board LB2
HIP-LIP-MS: INVESTIGATING PRESSURE EFFECTS ON PROTEIN STRUCTURE ON THE PROTEOME SCALE. **Haley M. Moran**, Edgar Manriquez-Sandoval, Stephen D. Fried, Richard E. Gillilan

L3151-Pos Board LB3
STRUCTURAL INVESTIGATION OF ALLOSTERIC REGULATION IN CLASS III RIBONUCLEOTIDE REDUCTASES. **Gisele A. Andree**, Michael A. Funk, Kelsey R. Miller, Christopher D. Dawson, Ally K. Smith, Daniel J. Deredge, Catherine L. Drennan

L3152-Pos Board LB4
PLASTICITY IN PROTEIN AND RRNA FOLDING IN ADAPTION TO LONG-TERM ENVIRONMENT CHANGES. **Chuankai (Kai) Zhou**, Fan Zheng, Zanlin Yu, Will Nickols, Lingraj Vannur, Yifan Cheng

L3153-Pos Board LB5
CHARACTERIZATION OF AN ALTERNATE CONFORMATION OF THE HIV-1 CAPSID PROTEIN CTD DIMER USING ^{19F} NMR AND WEIGHTED ENSEMBLE MD. **Darian T. Yang**, Lillian T. Chong, Angela M. Gronenborn

L3154-Pos Board LB6
IN-CELL SINGLE-MOLECULE FRET MEASUREMENTS OF CYTOSOLIC CRAF REVEALED COEXISTENCE OF TWO TYPES OF CLOSED CONFORMATIONS INTERACTING WITH 14-3-3. **Kenji Okamoto**, Yasushi Sako

L3155-Pos Board LB7
THE V3 GLYCAN TARGETING DH270 CLONAL LINEAGE EXPANDS VIABLE ASSOCIATION PATHWAYS. **Sangita Kachhap**, Carrie Saunders, Ashleigh Williams, Yishak Bililign, Jeanne Bubphamala, Barton F. Haynes, Rory Henderson

L3156-Pos Board LB8
SUB-DOMAIN-CONFORMATION DYNAMICS DRIVE SEQUENTIAL REACTIONS IN NON-RIBOSOMAL PEPTIDE SYNTHETASES. **Xun Sun**, Jonas Alfermann, Hao Li, Maxwell Watkins, Yi-Tsao Chen, Thomas E. Morrell, Florian Mayerthaler, Chia-Ying Wang, Tamiki Komatsuzaki, Jhih-Wei Chu, Nozomi Ando, Henning D. Mootz, Haw Yang

L3157-Pos Board LB9
STRUCTURAL ANALYSES OF RYR1 IN COMPLEX WITH S100A1 IN PRESENCE AND ABSENCE OF CA2+. **Gunnar Weninger**

Protein Structure, Prediction, and Design (Boards LB10 - LB24)

L3158-Pos Board LB10
EXPLORING THE EVOLUTION OF PRESTIN'S AREA-MOTOR FUNCTION THROUGH ANCESTOR RECONSTRUCTION. **Raul R. Araya-Secchi**

L3159-Pos Board LB11
PREDICTING THE STRUCTURE OF ENZYMES WITH METAL COFACTORS: THE EXAMPLE OF [FEFE] HYDROGENASES. Simone Botticelli, Giovanni La Penna, **Velia Minicozzi**, Francesco Stellato, Silvia Morante, Giancarlo Rossi, Cecilia Faraloni

L3160-Pos Board LB12
STRUCTURAL CHARACTERIZATION OF AN INHIBITORY NANOBODY BOUND TO NEDD4-2 HECT DOMAIN. **Emmanuel Afriyie**

L3161-Pos Board LB13
SIMULATION-DRIVEN STABILIZATION OF THE DNA EDITING ENZYME APOBEC3A. **Mohamed Shehata**, Farzana Kabir, Clare Morris, Daniel A. Harki, Rommie E. Amaro

L3162-Pos Board LB14
CHARACTERISATION OF THE L-TYPE AMINO ACID TRANSPORTER PROTEIN-PROTEIN INTERACTIONS. **Achombom (Jude) Tunyi**, Jo L. Parker, Simon Newstead, Lucy R. Forrest

L3163-Pos Board LB15
ADVANCING GLYCOSYNTHASE ENGINEERING FOR OLIGOSACCHARIDE SYNTHESIS WITH AZIDO SUGARS LEVERAGING TRANSITION STATE STABILIZATION. **Mohit Kumar**, Chandra Kanth Bandi, Tucker E. Burgin, Srividya V. Tallavajhula, Shishir P.S. Chundawat

L3164-Pos Board LB16
MUTATIONS TO THE N-TERMINAL SIGNATURE MOTIF OF MCT1 DISRUPT CD147 TRAFFICKING AND STABILIZING FUNCTIONS. **Devin Seka**, Annika Schulz, Tarjani M. Thaker, Thomas M. Tomasiak

L3165-Pos Board LB17
A MULTIVARIABLE APPROACH FOR THE RATIONAL DESIGN OF PH-SENSITIVE TRANSMEMBRANE PEPTIDES. **Alex G. Meyer**, Sophie Rizzo, Logan Campbell, Matthew Lazzara, Damien Thévenin

L3166-Pos Board LB18
ALPHAFOLD MEETS FLOW MATCHING FOR GENERATING PROTEIN ENSEMBLES. **Bowen Jing**, Bonnie Berger, Tommi Jaakkola

L3167-Pos Board LB19
MACHINE-LEARNING GUIDED DISCOVERY OF THE PHYSICOCHEMICAL AND STRUCTURAL PROPERTIES GOVERNING NON-COVALENT LASSO ENTANGLEMENTS IN FOLDED PROTEINS. **Justin Petucci**, Viraj Rana, Ian M. Sitarik, Hyebin Song, Edward P. O'Brien

L3168-Pos Board LB20
A LANGUAGE-BASED DIFFUSION MODEL TO PREDICT 3D STRUCTURE PROTEIN-DRUG COMPLEXES. **Mohammad Madani**, Anna Tarakanova

L3169-Pos Board LB21
GENETICALLY PROGRAMMABLE MODULATION OF MTOR SIGNALING WITH ENGINEERED SYNTHETIC INTRABODIES. **Kelly M. O'Leary**, Tomasz Slezak, Anthony A. Kossiakoff

L3170-Pos Board LB22
PROBING THE STRUCTURAL DIVERGENCE OF IFGF/NAV CHANNEL PROTEIN/PROTEIN INTERACTION INTERFACES FOR THERAPEUTIC TARGETING. **Zahra Haghighijoo**, Akanksha Gurtu, Fernanda Laezza

L3171-Pos Board LB23
EFFECTS OF DIFFERENT SURFACTANTS ON PARTICLE COUNT AND CONCENTRATION USING VARIOUS PREFILLED SYRINGES. **Mark J. Spence**, Erica Laveaga, Abhishek Telang, Jing Song

L3172-Pos Board LB24
ELEVATING VAE PROTEIN SEQEUNCE GENERATION WITH GENERATIVE CAPACTIY-DRIVEN ADVERSERIAL TRAINING. **Jason Lamanna**, Erfan Mowlaei, Paul English, Vincenzo Carnevale, Xinghua Shi

Intrinsically Disordered Proteins (Boards LB25 - LB35)

L3173-Pos Board LB25
MODELING INTRINSICALLY DISORDERED PROTEIN-PROTEIN INTERACTIONS AND IN SILICO FRAGMENT-BASED DESIGN OF PEPTIDE INHIBITORS. **Tâp Ha-Duong**

L3174-Pos Board LB26
THE INTRINSICALLY DISORDERED N-TERMINAL DOMAIN OF YEAST STM1 PROTEIN SHOWS AMYLOID FORMATION IN CONCENTRATION AND TIME-DEPENDENT MANNER. **Pranita U. Patil**

L3175-Pos Board LB27
TAU COALESCENCE WITH INTRACELLULAR NEUTRAL LIPIDS DRIVES DYSREGULATION OF BRAIN LIPID METABOLISM. **Anna Oliveras**, Jana Rossius, Guido Mastrobuoni, Mara-Camelia Rusu, Ella Bahry, Deborah Schmidt, Stefan Kempa, Severine Kunz, Agnieszka Rybak-Wolf, Melissa Birol

L3176-Pos Board LB28
MOLECULAR DYNAMICS SIMULATIONS OF A NUP98-LIKE SEQUENCE. **Jack Gwozdecky**, Katie Wilson, Olivier Trottier, Sarah Rauscher

L3177-Pos Board LB29
THE IMPACT OF DISTINCT MEMBRANE PHYSICAL PROPERTIES ON TAU BINDING TO LIPID VESICLES. Catarina Pimenta, Ana Coutinho, Ana Azevedo, Manuel Prieto, **Ana M. Melo**

L3178-Pos Board LB30
INTRINSICALLY DISORDERED PROTEIN (IDP) STRUCTURE PREDICTION USING BIDIRECTIONAL LSTM-BASED DEEP NEURAL NETWORK AND DIHEDRAL ANGLE-BASED SAMPLING METHOD. Suhyun PARK, Seonghun Jang, Satish Kumar Mudedla, **Sangwook Wu**

L3179-Pos Board LB31
EXPERIMENTAL AND COMPUTATIONAL ANALYSIS OF THE BASIS FOR ACCELERATED AMYLOID FORMATION BY A DISEASE LINKED MUTATION OF HUMAN AMYLIN. **Lakshan Manathunga**, Rehana Akter, Carlos Simmerling, Daniel P. Raleigh

L3180-Pos Board LB32
CONTRASTING INTERACTION PATTERNS OF TAU AND ASYNUCLEIN WITH SPERMINE VIA ATOMISTIC SIMULATIONS. **Debasis Saha**, Xun Sun, Rebecca Sternke-Hoffmann, Jinghui Luo, Wenwei Zheng

L3181-Pos Board LB33
THE STRAND EXCHANGE DOMAIN OF TUMOR SUPPRESSOR PALB2 IS INTRINSICALLY DISORDERED AND PROMOTES OLIGOMERIZATION-DEPENDENT DNA COMPACTION. Yevhenii Kyriukha, Jennifer Redington, Maxwell Watkins, Jesse B. Hopkins, Vladimir N. Uversky, Abhi Ganti, Nithya Chintalapti, Reza Dastvan, Nicola Pozzi, **Sergey Korolev**

L3182-Pos Board LB34
COARSE-GRAINED MODELS OF ELASTIN ASSEMBLIES. **Chengeng Yang**, Anna Tarakanova

L3183-Pos Board LB35
MOLECULAR DYNAMICS SIMULATIONS OF A MINIMAL MODEL FOR A COHESIVE FG-NUCLEOPORIN. **Olivier Trottier**, Jack Gwozdecky, Katie A. Wilson, Sarah Rauscher

DNA Replication, Recombination, and Repair (Boards LB36 - LB39)

L3184-Pos Board LB36
MOLECULAR MECHANISMS OF A DNA STRAND ANNEALING RECOMBINASE FROM PROPHAGE LISTERIA INNOCUA. **Carter T. Wheat**, Caroline F. Karbowski, Charles E. Bell

L3185-Pos Board LB37
CROSSLINKING AND INTERCALATIVE ACRIDINES WITH MINOR GROOVE BINDERS. **Haruki Nishioka**, Keiko Inami, Masataka Mochizuki

L3186-Pos Board LB38
INVESTIGATING THE ROLE OF MRC1 IN EUKARYOTIC HIGH-FIDELITY REPLICATION. **Adam Timmerman**, Alisa Shaw, Grant Schauer

L3187-Pos Board LB39
DIFFERENTIAL DAMAGE DETECTION BY XPD HELICASE. **Alice Troitskaia**, Paras Gaur, Masayoshi Honda, Maria Spies, Yann R. Chemla

RNA Structure and Dynamics (Boards LB40 - LB43)

L3188-Pos Board LB40
SINGLE-MOLECULE ANALYSIS OF PRE-MRNA CLEAVAGE AND POLYADENYLATION. **Ethan Aubuchon**

L3189-Pos Board LB41
EXPLORING NASCENT RNA STRUCTURE FORMATION IN THE RNA-EXIT CHANNEL OF RNA POLYMERASE THROUGH SINGLE-MOLECULE STUDIES. **Junqiao Zhu**

L3190-Pos Board LB42
KIN-RNA: A KNOWLEDGE-BASED INTERACTION MODEL FOR RNA DYNAMICS. Mario Villada-Balbuena, **Mauricio D. Carbajal-Tinoco**

L3191-Pos Board LB43
STRUCTURAL CHARACTERIZATION OF THE LONG NON-CODING RNA *SCHLAP1*. **Mihyun Oh**, Zahra Charania, Roshni Kadam, Christopher Markgraf, Srinivas Somarowthu

Membrane Physical Chemistry (Boards LB44 - LB47)

L3192-Pos Board LB44
EVALUATION OF STABILITY IN LIPOSOMES COMPOSED OF MIXED PHOSPHOLIPIDS. **Sharraeh Rezaei**, Kenneth Mineart

L3193-Pos Board LB45
OPTIMIZATION OF LIPOSOME EXTRUSION: EFFECTS OF INCREASING NUMBER OF PASSES. **Kenneth Mineart**, Kasey Piper

L3194-Pos Board LB46
MECHANISM OF TAT PEPTIDE-FACILITATED ENDOSOMAL ESCAPE - INSIGHT FROM A GIANT UNILAMELLAR VESICLE STUDY. **Ian Liau**, Tai-You Chu

L3195-Pos Board LB47
UNDERSTANDING FUNDAMENTAL ASPECTS GOVERNING LIPID BILAYER HYDRATION AND MEMBRANE FLUIDITY: AN FT-IR STUDY. **Deborah Aurora Perini**, Mateo Calle-Velasquez, Monica Gutierrez-Salazar, Jesus Salgado, Victor Lorenz-Fonfria

Membrane Structure (Boards LB48 - LB51)

L3196-Pos Board LB48
MECHANICAL PROPERTIES OF PULMONARY SURFACTANT FILMS OF DIFFERENT ORIGIN AT THE AIR-LIQUID INTERFACE. **Ainhoa Collada**, Pablo Sánchez-Puga, Johann Mertens, Emma Batllori-Badia, Alberto Galindo, Jesus Perez-Gil, Antonio Cruz

L3197-Pos Board LB49
ENHANCING ANTI-TUMOR IMMUNE RESPONSES BY SINGLE DOMAIN ANTIBODY DISPLAY. **Leah E. Knepper**, Emily Ankrom, Damien Thévenin

L3198-Pos Board LB50
EXPLORING MORPHOLOGICAL BEHAVIOR OF DIPALMITOYL-GLYCERYL-TRIMETHYLHOMOSERINE (DPTS) - CHLOROSULFOLIPID MEMBRANE SYSTEMS. **Janghee Hong**, Rakwoo Chang

L3199-Pos Board LB51
VARYING THE POSITION OF PHOSPHOLIPID ACYL CHAIN UNSATURATION MODULATES HOPANOID AND STEROL ORDERING. **Edward Lyman**, Nguyen Ha Ngoc Anh, Liam M. Sharp, James P. Saenz

General Protein-Lipid Interactions (Boards LB52 - LB59)

L3200-Pos Board LB52
THE FUNCTIONAL SIGNIFICANCE OF PATHOGENIC VARIANTS IN RPE65$^{107-125}$ AMPHIPATHIC HELIX IN RPE65-MEMBRANE RECOGNITION AND BINDING. **Sheetal Uppal**, Eugenia Poliakov, Susan Gentleman, Thomas M. Redmond

L3201-Pos Board LB53
NANOSCALE ENGAGEMENT AND CLUSTERIZATION OF PROGRAMMED DEATH LIGAND 1 (PD-L1) IN THE MEMBRANE LIPID RAFTS OF NON SMALL CELL LUNG CANCER CELLS. Simone Civita, Martina Ruglioni, Tiziano Salvadori, Sofia Cristiani, Vittoria Carnicelli, Serena Barachini, Iacopo Petrini, Irene Nepita, Marco Castello, Alberto Diaspro, Paolo Bianchini, Barbara Storti, Stefano Fogli, Romano Danesi, **Ranieri Bizzarri**

L3202-Pos Board LB54
LIPID INTERACTIONS IN A NEW LIGHT USING MULTI-PARAMETRIC SURFACE PLASMON RESONANCE (MP-SPR). **Abhishek Sharma**, Annika Jaervinen, Sanna Auer

L3203-Pos Board LB55
PHOSPHATIDYLINOSITOL 3 PHOSPHATE MEDIATES ARC CAPSIDS SECRETION THROUGH THE MULTIVESICULAR BODY PATHWAY. **Kritika Mehta**

L3204-Pos Board LB56
FROM AMPHIBIANS TO ANTIBACTERIALS: ILLUMINATING THE MEMBRANE DISRUPTION STRATEGY OF AUREIN 1.2 FOR OVERCOMING RESISTANCE USING FLUORESCENCE CORRELATION SPECTROSCOPY. **Zahra (Nadia) Saadatmand**, Adam Mechler, Thorsten Wohland

L3205-Pos Board LB57
THE THREE MUSKETEERS: INTERACTIONS OF PI3KA WITH A MODEL CELL MEMBRANE IN THE PRESENCE OF HRAS. **Anjali Krishna**, Zahra Shadfar Shamim, Jane R. Allison, Jack U. Flanagan

L3206-Pos Board LB58
INVESTIGATING THE ACTION MECHANISM OF PORE-FORMING TOXINS WITH MOLECULAR DYNAMICS SIMULATIONS AT DIFFERENT RESOLUTION SCALES. **Costanza Paternoster**

L3207-Pos Board LB59
ROLE OF MEMBRANE RAFTS IN REGULATING DESMOSOMAL CADHERIN ORIENTATIONAL ORDER. **Aniruddha Mukherjee**, William F. Dean, Alexa L. Mattheyses

Membrane Receptors and Signal Transduction (Boards LB60 - LB65)

L3208-Pos Board LB60
CALMODULIN REGULATION OF NAV ISOFORMS. **Timothy M. Cho**, Ryan W. Mahling, Manu Ben-Johny

L3209-Pos Board LB61
MEMBRANE CURVATURE SEPARATES CONFORMATIONAL STATES OF THE GLP-1 RECEPTOR. **Jasmin B. Maglic**, Gabriele Kockelkoren, Paulina Kaas, Christopher Shuttle, Dimitrios Stamou

L3210-Pos Board LB62
DEFINING THE PHARMACOLOGY OF DYNAMIC HETERODIMERIC AMYLIN RECEPTORS WITH NOVEL FLUORESCENT ASSAYS. **Sandra Gostynska**, Jordan A. Karim, Peyton H. Gordon, Nevin A. Lambert, Asuka Inoue, Augen A. Pioszak

L3211-Pos Board LB63
ACTIVATION OF ORPHAN RECEPTOR LGPR23 BY AN ENDOGENOUS METABOLITE EXACERBATESNONALCOHOLIC FATTY LIVER DISEASE. **Xiao Yu**, Zhao Yang, Jie Cheng

L3212-Pos Board LB64
BINDING INTERACTIONS FOR THE CD40-CD40L COMPLEX IN LIGAND MUTANTS A123E, S222F, AND G257R, DETECTED IN PATIENTS WITH HYPER-IGM SYNDROME. **Eduardo Jardón-Valadez**, Jose Luis Maravillar Montero, Guadalupe Velásquez-Ortiz

L3213-Pos Board LB65
EFFECTS OF TCR AND CD28 CO-ACTIVATION ON PD-1 PHOSPHORYLATION. **Elizabeth M. Bailey**, Julian A. Rojo, Michael J. Wester, Diane S. Lidke

Intracellular Calcium Channels and Calcium Sparks and Waves (Boards LB66 - LB66)

L3214-Pos Board LB66
EVALUATING POINT MUTATIONS IN CALMODULIN TO FINE-TUNE CALCIUM RELEASE PROPERTIES OF RYANODINE RECEPTOR TYPE II (RYR2). **Md. Nure Alam Afsar**, Svetlana Tikunova, Jonathan P. Davis, Christopher N. Johnson

Intracellular Organelle Dynamics (Boards LB67 - LB67)

L3215-Pos Board LB67
OBSERVING THE DYNAMIC PROCESS OF CELLULOSE POLYSACCHARIDE BIOSYNTHESIS AND ASSEMBLY INTO CELL WALLS THROUGH LIVE IMAGING OF PLANT CELLS. **Hyun Huh**, Dharanidaran Jayachandran, Junhong Sun, Mohammad Irfan, Eric Lam, Sang-Hyuk Lee, Shishir P.S. Chundawat

Voltage-Gated Na Channels (Boards LB68 - LB70)

L3216-Pos Board LB68
MOLECULAR MECHANISM OF NA^+ CONDUCTION IN EUKARYOTIC VOLTAGE-GATED NA+ CHANNELS. **Richard L. Banh**, Régis Pomès

L3217-Pos Board LB69
BIOPHYSICAL CHARACTERIZATION OF A NEW *SCN4A* VARIANT INVOLVED IN MYOTONIA AND PARAMYOTONIA CONGENITA. **Quentin Plumereau**, Mohamed Chahine

L3218-Pos Board LB70
AN ALL ATOM MODEL OF THE HUMAN CARDIAC SODIUM CHANNEL (NAV1.5) IN A LIPID BI-LAYER WITH EXPLICIT SALT AND WATER PROVIDES INSIGHT INTO NON CONDUCTING CONFIGURATIONS. **Garrett Knotts**, Emily M. Campbell, Spencer Lile, Christopher N. Johnson

Voltage-Gated Ca Channels (Boards LB71 - LB72)

L3219-Pos Board LB71
REGULATION OF VOLTAGE SENSING STRUCTURES OF CAV1.2 CHANNEL BY THE AUXILIARYB-SUBUNIT. Daniela De Giorgis, guido mellado, Marina Angelini, Nicoletta Savalli, Riccardo Olcese, **Alan Neely**

L3220-Pos Board LB72
ENGINEERED DEPALMITOYLASES ENABLE SELECTIVE MANIPULATION OF PROTEIN PALMITOYLATION. **Srinidhi Jayaraman**, Audrey Lauris Kochiss, Thy-Lan Alcalay, Pedro J. del Rivero Morfin, Manu Ben-Johny

Membrane Pumps, Transporters, and Exchangers (Boards LB73 - LB75)

L3221-Pos Board LB73
STRUCTURAL INSIGHTS INTO THE FTSEX-ENVC COMPLEX REGULATION ON SEPTAL PEPTIDOGLYCAN HYDROLYSIS IN VIBRIO CHOLERAE. **Aili Hao**

L3222-Pos Board LB74
TARGETING INTRACELLULAR CHLORIDE AND PH REGULATION IN ISCHEMIC HEART DISEASE. Phung N. Thai, Lu Ren, Daphne A. Diloretto, Pauline Trinh, Yang Zheng, Valeriy Timofeyev, Nipavan Chiamvimonvat, **Xiao-Dong Zhang**

L3223-Pos Board LB75
PRESSURE MODULATES THE CONFORMATIONAL LANDSCAPE OF A MEMBRANE TRANSPORTER. **Yun Huang**, David Eliezer, Olga Boudker

Skeletal Muscle Mechanics, Structure, and Regulation (Boards LB76 - LB77)

L3224-Pos Board LB76
IN VITRO BIOMIMETIC MUSCLE INJURY MODELS TO STUDY POTENTIAL QUANTUM EFFECTS BEHIND MUSCLE REGENERATION. **Kai Wang**, Gabrielle Gilmer, Antonio Woollard, Boris Mesits, Michael Hatridge, Fabrisia Ambrosio

L3225-Pos Board LB77
HIGH STRESS DOES NOT INCREASE CROSS-BRIDGE RECRUITMENT IN SKELETAL MUSCLE *IN SITU*. Eng Kuan Moo, **Venus Joumaa**, Walter Herzog

Smooth Muscle and Cardia Muscle Regulation (Boards LB78 - LB78)

L3226-Pos Board LB78
GLOBAL PAK1 DELETION COMPROMISES SARCOMERE SHORTENING AND CA^{2+} RELEASE AND REUPTAKE KINETICS IN NEONATAL MOUSE VENTRICULAR MYOCYTES. **Christopher Solís**, Priyanka Perumalraja, Paola Rosas

Kinesins, Dyneins, and Other Microtubule-based Motors (Boards LB79 - LB80)

L3227-Pos Board LB79
CONTROL OF MOTOR LANDING AND PROCESSIVITY BY THE CAP-GLY DOMAIN IN THE KIF13B TAIL. **Xiangyu Fan**, Richard J. McKenney

L3228-Pos Board LB80
BIOCHEMICAL CHARACTERIZATION OF *C. ELEGANS* KINESIN BMK-1. **Toru Kurosaka**, Kumagai Shunsuke, Fofou Yonta Tostani, Islam MD Alrazi, Kazunori Kondo, Shinsaku Maruta

Cytoskeletal-based Intracellular Transport (Boards LB81 - LB82)

L3229-Pos Board LB81
HUNDREDS OF MYOSIN 10S PACK INTO FILOPODIA AND COULD CAUSE TRAFFIC JAMS ON ACTIN. Julia Shangguan, **Ronald S. Rock**

L3230-Pos Board LB82
TRANSPORTING THE GLI TRANSCRIPTION FACTORS TO THE CILIUM TIP COMPARTMENT FOR HEDGEHOG SIGNALING: A TALE OF TWO MOTOR SYSTEMS. **Pei-I Ku**, Jamuna S. Sreeja, Radhika Subramanian

Diffraction and Scattering Techniques (Boards LB83 - LB83)

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STRUCTURE AND OPTIMIZATION OF A SERIES OF CHELATORS BASED ON A THIOSEMICARBAZONE SCAFFOLD. **Christian S. Parry**, Chloe Alston, Maame K. Asiamah, Aminah Coleman, Ibukunoluwa D. Kayode, Nkumbu Kamfwa, Hanna Wosen

Molecular Dynamics (Boards LB84 - LB94)

L3232-Pos Board LB84
SEQUENCE EFFECTS ON THE CONFORMATIONAL LANDSCAPE OF CYTOTOXIC AND FUNCTIONAL AMYLOID OLIGOMERS. **Kelsie M. King**, Hajar Zaheer, Anne M. Brown

L3233-Pos Board LB85
STRUCTURE CHARACTERIZATION OF AN INTRINSICALLY DISORDERED PEPTIDE USING IN-DROPLET HYDROGEN DEUTERIUM EXCHANGE MASS SPECTROMETRY, MOLECULAR DYNAMICS SIMULATIONS, AND MODELING. **Mohammad Mohammad**

L3234-Pos Board LB86
EXPLORING THE ACCURACY OF SARS-COV-2 ANTIBODY ESCAPE PREDICTIONS BY USING LARGE-SCALE DATA. **America Chi-Uluac**, Jonathan Barnes, Jagdish Suresh Patel, F. Marty Ytreberg

L3235-Pos Board LB87
DIFFUSION DYNAMICS OF DOPAMINE AND ITS DERIVATIVES ON HYDROGEN TERMINATED CARBON EDGES. **Jessica K. Niblo**, B. Jill Venton, Kateri H. DuBay

L3236-Pos Board LB88
THE LIPID ROBIN HOOD: ELUCIDATING THE MOLECULAR MECHANISM OF LIPID TRANSPORT IN MYCOPLASMA PNEUMONIAE. **Serena Maria Arghittu**, Sina Manger, Lasse Sprankel, Jakob Meier-Credo, Konstantin Wieland, Martin P. Schwalm, Daniela Bublak, Stefan Knapp, Julian Langer, Achilleas Frangakis, Roberto Covino

L3237-Pos Board LB89
MACHINE LEARNING BASED REPARAMETERIZATION OF SWM4-NDP WATER MODEL IN POLARIZABLE DRUDE OSCILLATOR FORCE FIELD. **Xiaojing Teng**, Wenbo Yu, Alexander D. MacKerell

L3238-Pos Board LB90
THE DIRECT INFLUENCE ON MECHANICAL PROPERTIES OF TROPOCOLLAGEN BY AGE ADDUCTS. **Yu-Bai Xiao**, Anna Tarakanova

L3239-Pos Board LB91
REFINEMENT OF THE AMBER FORCE FIELD FOR RNA: IMPROVING THE DESCRIPTION OF NON-BONDED INTERACTIONS. **Anees Mohammed Keedakkatt Puthenpeedikakkal**, David H. Mathews, Chapin E. Cavender

L3240-Pos Board LB92
FUNCTIONS OF PROLYL HYDROXYLATION IN ELASTIN. **Chengeng Yang**, Anna Tarakanova

L3241-Pos Board LB93
WEIGHTED OBSERVABLES: CONSTRUCTING NEURAL NETWORK POTENTIALS USING EXPERIMENTAL DATA FOR IDPS. **Yao Li**, Qiwei Ye, Mingliang Zeng, Jingcheng Yu, Zhaoming Chen

L3242-Pos Board LB94
ACCELERATING DISCOVERY WITH NAMD 3 SIMULATION: A NEW HIGH-SPEED COMPUTATIONAL MICROSCOPE. **David J. Hardy**, Eric J. Bohm, Haochuan Chen, Barry Isralewitz, Rafael C. Bernardi, Emad Tajkhorshid

Optical Spectroscopy: CD, UV-VIS, Vibrational, Fluorescence (Boards LB95 - LB96)

L3243-Pos Board LB95
DE NOVO LIPOGENESIS AND FATTY ACID SCAVENGING IN OSTEOSARCOMA CELLS. **Grayson R. Hoy**, Sydney O. Shuster, Hannah Castillo, Lydia Tarekegn, Caitlin Davis

L3244-Pos Board LB96
SPECIFIC ROS QUENCHING BY NATURAL ANTIOXIDANTS. **Tomas Buenfil Chi**

Force Spectroscopy and Scanning Probe Microscopy (Boards LB97 - LB99)

L3245-Pos Board LB97
A DIY GUIDE TO BUILDING AND USING A BENCHTOP CENTRIFUGE FORCE MICROSCOPE. **Ken Halvorsen**, Jibin Abraham Punnoose, Andrew Hayden, Chai Kam

L3246-Pos Board LB98
SINGLE MOLECULE REAL-TIME ANALYSIS OF DYNAMIC NUCLEIC ACID INTERACTIONS. **Nigel Skinner**

L3247-Pos Board LB99
INVESTIGATING CALCIUM MODULATED PLANT ROOT HAIR ADHESION DYNAMICS. **Natasha Mulenga**, Anne E. Murdaugh

Micro- and Nanotechnology (Boards LB100 - LB102)

L3248-Pos Board LB100
NANOFLUIDIC MEMRISTIVE BEHAVIOR IN DE NOVO DESIGNED PROTEIN CHANNELS. **Sydney K. Myers**, Zhongwu Li, Aleksandr Noy

L3249-Pos Board LB101
NOVEL NON-LINEAR DNA ORIGAMI LEVER: BEYOND CONVENTIONAL ORIGAMI DESIGN. **D. Sebastian Arias**, Rebecca E. Taylor

L3250-Pos Board LB102
THE IMPACT OF BASE-STACKING ON DNA TETRAHEDRON STABILITY. **Dadrian Cole**

MONDAY LATE POSTERS

1:45 PM–3:45 PM, EXHIBIT HALL AB

All abstracts are available through the desktop planner and mobile app.

Posters should be mounted beginning at 6:00 PM on Sunday and removed by 5:30 PM on Monday evening. Posters will be on view until 10:00 PM the night before presentation. Board numbers indicate where boards are located in the Exhibit Hall.

Late posters are to be placed on boards beginning with "LB".
These boards are located on the right-hand side of the Exhibit Hall.

ODD-NUMBERED BOARDS 1:45 PM–2:45 PM | EVEN-NUMBERED BOARDS 2:45 PM–3:45 PM

Board Numbers	Category
Board LB1 - LB9	Protein Structure and Conformation II
Board LB10 - LB17	Protein Stability, Folding, and Chaperones
Board LB18 - LB30	Membrane Protein Structures
Board LB31 - LB32	Membrane Protein Folding
Board LB33 - LB37	Condensates in Physiology and Disease
Board LB38 - LB41	Transcription
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Board LB58 - LB61	Ion Channel Regulatory Mechanisms
Board LB62 - LB69	Ion Channels, Pharmacology, and Disease
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Board LB74 - LB81	Microtubules, Structure, Dynamics, and Associated Proteins
Board LB82 - LB87	Myosins
Board LB88 - LB100	Optical Microscopy and Superresolution Imaging
Board LB101 - LB102	Single-Molecule Spectroscopy
Board LB103 - LB107	Bioengineering

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Monday Late Posters (Boards LB1 - LB107)

Protein Structure and Conformation II (Boards LB1 - LB9)

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SIMULATING BCL10 IN SOLUTION: MOLECULAR DYNAMICS INSIGHTS FROM WILD-TYPE AND MUTANT MONOMERS. **Mark S. Atwood**

L3252-Pos Board LB2
EPR CHARACTERIZATION OF INTRINSICALLY DISORDERED REGIONS IN THE RNA-BINDING PROTEIN SRSF1. **Laura Galazzo**, Noemie Kociolek, Frédéric Allain, Gunnar Jeschke

L3253-Pos Board LB3
STRUCTURAL ENABLEMENT AND UNDERSTANDING OF HSV1 POL INHIBITION BY PNU-183792, A NON-NUCLEOSIDE INHIBITOR. **Mee Ra Hong**, Robert P. Hayes, Christine Burlein, John Reid, Daniel Klein, David M. Tellers, Izzat Raheem, Anthony W. Shaw, Edward Murray, Philip M. McKenna

L3254-Pos Board LB4
STRUCTURAL STUDIES OF ANTIGENIC PROTEINS INTO SILICA PARTICLES. **Jose Luiz S. Lopes**, Jessica A. Pedro, Tereza S. Martins, Marcia C. Fantini, Soraia C. Jorge, Viviane F. Botosso

L3255-Pos Board LB5
CHARACTERIZING THE STRUCTURAL AND PHYSIOLOGICAL EFFECTS OF IMPDH2 MUTATION. **Audrey G. O'Neill**, Morgan E. McCartney, Jeet H. Patel, Andrea E. Wills, Justin M. Kollman

L3256-Pos Board LB6
RECOMBINANT EXPRESSION AND CRYSTALLIZATION OF MALARIA PEPTIDE/HLA IMMUNOSIGNALING COMPLEXES FOR ANTIGEN DISCOVERY AND CHARACTERIZATION. **Maya Z. Kahn**

L3257-Pos Board LB7
THE CONFORMATIONAL DYNAMICS OF THE PH DOMAIN-DEPENDENT ARF GTPASE-ACTIVATING PROTEIN ASAP1 ARE ALTERED BY A SOLUBLE PHOSPHOINOSITIDE ANALOGUE. **Eric M. Rosenberg**, Maxwell B. Watkins, Olivier Soubias, Yifei Li, Anthony M. Ciancone, Allie Marcin, AJ Morton, Jesse B. Hopkins, Rick Huang, Francis J. O'Reilly, Andrew Byrd, Paul A. Randazzo

L3258-Pos Board LB8
SERVER PREDICTION FOR CIRCULAR DICHROISM SPECTRA OF PROTEINS WITH MISSING RESIDUES. **Mauricio D. Carbajal-Tinoco**

L3259-Pos Board LB9
HYDROSTATIC PRESSURE-INDUCED RAS ACTIVATION IS ENHANCED BY BOTH GAP AND GEF DOMAINS. **Teruhiko Matsuda**, Minki Chang, Katsuko Furukawa, Takashi Ushida, Taro Q.P. Uyeda

Protein Stability, Folding, and Chaperones (Boards LB10 - LB17)

L3260-Pos Board LB10
ANCESTOR OF APOPTOTIC CAPASES. **David A. Diaz**, Melissa R. Fee, Isha U. Joglekar, Mithun Nag Karadi Giridhar

L3261-Pos Board LB11
REVISITING ENERGY FLUCTUATIONS IN PROTEIN MOLECULES. **Eaton E. Lattman**

L3262-Pos Board LB12
EXTRACELLULAR CHAPERONE, CLUSTERIN, AND AB42 OLIGOMER INTERACTIONS. **Li-Uen Lin**, Matthias M. Schneider, Mark Wilson, Tuomas Knowles

L3263-Pos Board LB13
PROTEIN BACKBONE ALTERATION IN NON-HAIRPIN B-TURNS: IMPACTS ON TERTIARY FOLDED STRUCTURE AND STABILITY. **Thomas W. Harmon**

L3264-Pos Board LB14
FOLD SWITCH MECHANISM IN THE MAD2 PROTEIN: AN INTERPRETATION USING STRUCTURE-BASED MODELS AND COEVOLUTIONARY ANALYSES. **Ander F. Pereira**, Vinicius G. Contessoto, Jose N. Onuchic, Leandro Martinez

L3265-Pos Board LB15
COMPUTATIONAL STUDY OF THE FLUOROUS EFFECT IN PROTEIN FOLDING. Tyler Savitski, Maria Belen Gonzalez, Joseph Gubbiotti, **Del M. Lucent**

L3266-Pos Board LB16
PROBING PROTEIN KINETIC STABILITY THROUGH INTERROGATION OF KNOT STRUCTURES IN THERMOTOLERANT PROTEIN FROM THERMUS THERMOPHILUS. **Leeker Lin**, Ernesto Alvarez

L3267-Pos Board LB17
EFFECT OF PROTEIN CROWDERS AND CHARGE ON THE FOLDING OF SOD1 VARIANTS. Atrayee Sarkar, Andrei G. Gasic, Margaret S. Cheung, **Gregory Morrison**

Membrane Protein Structures (Boards LB18 - LB30)

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CHARACTERIZATION OF THE B-BARREL ASSEMBLY MACHINERY IN FUSOBACTERIUM NUCLEATUM. **Claire Overly Cottom**, Daniel Slade, Nicholas Noinaj

L3269-Pos Board LB19
STRUCTURAL ANALYSIS OF ATP SYNTHESIS *IN SITU*. **Lea Dietrich**, Ahmed-Noor Adam Agip, Christina Kunz, Werner Kühlbrandt

L3270-Pos Board LB20
ARCHITECTURE OF THE TOM CORE COMPLEX ACROSS ORGANISMS. **Pamela Ornelas**, Agalya Periasamy, Jacqueline M. Gulbis, Werner Kühlbrandt

L3271-Pos Board LB21
MOLECULAR BASIS OF POLYSPECIFIC DRUG AND XENOBIOTIC RECOGNITION BY OCT1 AND OCT2. **Yang Suo**, Seok-Yong Lee

L3272-Pos Board LB22
FAB-ULOUS STUDIES OF PHOSPHOLIPASE C EPSILON. **Kadidia Samassekou**, Elisabeth Garland-Kuntz, Vaani Ohri, Satchal K. Erramilli, Livia M. Bogdan, Abigail M. Gick, Anthony A. Kossiakoff, Angeline M. Lyon

L3273-Pos Board LB23
HIGH-RESOLUTION *IN-SITU*STRUCTURES OF MAMMALIAN MITOCHONDRIAL RESPIRATORY SUPERCOMPLEXES IN REACTION WITHIN NATIVE MITOCHONDRIA. **Wan Zheng**

L3274-Pos Board LB24
STRUCTURAL STUDIES OF MONOMERIC MITOCHONDRIAL SORTING AND ASSEMBLY MACHINERY COMPLEX REVEALS A DYNAMIC LATERAL GATE. **Kathryn A. Diederichs**, Istvan Botos, Scout Hayashi, Joseph A. Mindell, Susan K. Buchanan

L3275-Pos Board LB25
AN ALL-ATOM MODEL OF A VOLTAGE-GATED CALCIUM CHANNEL WITH EXPLICIT SALT AND WATER. **Emily M. Campbell**, Steven R. Gwaltney, Christopher N. Johnson

L3276-Pos Board LB26
AT THE ORIGIN OF CONGENITAL MUSCULAR DYSTROPHY: SHEDDING LIGHT ON THE TDARK PROTEINS DPM2 AND DPM3. **Andrea Saponaro**, Atiyeh Sadat Sharifzadeh

L3277-Pos Board LB27
DIFFERENT INTERACTIONS WITH THE POCKET LIPIDS EXPLAIN THE POOR MECHANOSENSITIVITY OF YNAI COMPARED TO MSCS. Nathan Will, Yoshitaka Nakayama, **Giorgos Hiotis**, Zijing Zhou, Charles D. Cox, Boris Martinac, Thomas Walz

L3278-Pos Board LB28
STRUCTURAL BASIS FOR SUBSTRATE RECOGNITION IN THE YEAST CADMIUM FACTOR 1, YCF1. **Tik Hang Soong**

L3279-Pos Board LB29
FUNCTIONAL AND BIOCHEMICAL CHARACTERIZATION OF THE GLYCOSYLTRANSFERASE ARNT INVOLVED IN BACTERIAL POLYMYXIN RESISTANCE. **Stephannie Rosario-Garrido**, Vasileios I. Petrou

L3280-Pos Board LB30
BIOCHEMICAL AND BIOPHYSICAL CHARACTERIZATION OF THE DEFORMYLASE ARND THAT RENDERS UNDECAPRENYL PHOSPHATE GLYCOSYLATION IRREVERSIBLE LEADING TO POLYMYXIN RESISTANCE. **Ankita Punetha**, Vasileios I. Petrou

Membrane Protein Folding (Boards LB31 - LB32)

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STABILITY OF A MEMBRANE PROTEIN IN A PEROXIDIZED LIPID MEMBRANE. **Megan M. Gessel**

L3282-Pos Board LB32
EXPLORING THE ROLE OF LIPID MEMBRANE BIOPHYSICAL PROPERTIES ON THE FOLDING OF A CHOLESTEROL TRANSPORTER. **Delfin Gerard Buyco**, Sara Carina Fedosejevs, Roshan Javanshad, Stephanie M. Cologna, Neha P. Kamat

Condensates in Physiology and Disease (Boards LB33 - LB37)

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LIVE-CELL SUPER-RESOLUTION IMAGING OF RNA POLYMERASE II IN MOUSE MYOBLASTS. **Haneul Yoo**, Ibrahim Cisse

L3284-Pos Board LB34
PROPERTIES OF FUSION TFE3 IN TRANSLOCATION RENAL CELL CARCINOMA. **Choon Leng So**, Ye Jin Lee, Binglin Huang, Danfeng Cai

L3285-Pos Board LB35
INVESTIGATING THE BIOCHEMICAL BASIS OF OLFACTORY RECEPTOR TRANSCRIPTIONAL HUBS. **Natalie McArthur**, Lawrence Shapiro, Stavros Lomvardas

L3286-Pos Board LB36
THE METASTABILITY OF HNRNPA1 LCD CONDENSATES RELATIVE TO GLOBALLY STABLE FIBRILS DETERMINES KINETICS OF FIBRIL FORMATION AND DISEASE PATHOGENESIS. Tapojyoti Das, Fatima K. Zaidi, Mina Farag, Kiersten Ruff, Rohit V. Pappu, **Tanja Mittag**

L3287-Pos Board LB37
STRUCTURAL DIVERSITY DETERMINES THE ASSOCIATION BETWEEN MRNAS ENCODING HETEROMERIC ION CHANNELS. Lisandra Flores-Aldama, **Annabelle S. Hoth**, Ian Seim, Amy Gladfelter, Gail A. Robertson

Transcription (Boards LB38 - LB41)

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DIRECT OBSERVATION OF A TRANSCRIPTIONAL CONDENSATE EFFECT ON SUPER-ENHANCER CONTROLLED GENE BURSTING. **Manyu Du**

L3289-Pos Board LB39
PROMOTER-PROXIMAL TRANSCRIPTION-TRANSLATION COUPLING REGULATES TRANSCRIPTION IN *E. COLI*. **Soojin Park**, Sora Yang, Jina Yang, Yong Hee Han, Giho Kim, SoJung Park, Sang Woo Seo, Nam Ki Lee

L3290-Pos Board LB40
SINGLE-VIRION DETECTION OF MAMMALIAN ORTHOREOVIRUS TRANSCRIPTION. **Ava Altenbern**, Ed Partlow, Tijana Ivanovic

L3291-Pos Board LB41
COMBINING BIOINFORMATICS AND COMPUTER MODELING TO INVESTIGATE STRUCTURE-FUNCTION RELATIONSHIP IN DROSOPHILA CHROMATIN. **Igor S. Tolokh**, Alexander Y. Afanasyev, Yoonjin Kim, Igor V. Sharakhov, Alexey V. Onufriev

Membrane Fusion and Non-Bilayer Structures (Boards LB42 - LB43)

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MECHANISM OF SNARE LOADING, PRIMING, AND RECYCLING BY A AAA+ SUPRAMOLECULAR MACHINE. **Yousuf A. Khan**, K. Ian White, Richard G. Held, Richard Pfuetzner, Luis R. Esquivies, Ashwin Balaji, Garvey Mckenzie, Fang Liu, William Wickner, Axel T. Brunger

L3293-Pos Board LB43
THE LASV STABLE SIGNAL PEPTIDE UNDERGOES A CONFORMATIONAL CHANGE DURING VIRAL FUSION. **Shane Collins**

Protein-Lipid Interactions: Structures (Boards LB44 - LB44)

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A SURVEY OF FUNGAL AND MAMMALIAN TMEM16S COARSE-GRAINED SIMULATIONS REVEALS MECHANISTIC INSIGHTS OF LIPID SCRAMBLING. **Yisheng Zheng**, Christina A. Stephens, Niek van Hilten, Michael Grabe

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FORCE IS TRANSMITTED TO THE HAIR CELL MECHANOTRANSDUCER CHANNEL VIA LHFPL5. **Robert Fettiplace**, Maryline Beurg, Evan T. Schwalbach

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E-CADHERIN/EGFR COMPLEXES MEDIATE MECHANOTRANSDUCTION AT INTERCELLULAR ADHESIONS. **Yubo Zou**, Deborah E. Leckband

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SHEAR-INDUCED DETACHMENT OF CILIA IN *CHLAMYDOMONAS REINHARDTII*. Yuya Kadowaki, Miyu Tsuji, **Kenjiro Yoshimura**

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PHOSPHOLIPASE D REGULATES PIEZO2 CHANNELS VIA FORMATION OF PHOSPHATIDIC ACID. Matthew Gabrielle, Yevgen Yudin, Yujue Wang, Xiaoyang Su, **Tibor Rohacs**

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AGING-ASSOCIATED MODIFICATION OF CELL MECHANICS DETERMINES INTRANUCLEAR DYNAMINCS. **Sunah Lee**

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LINC-MEDIATED ATTENUATION OF NUCLEAR TENSION INDUCES THE NUCLEAR WRINKLING IN HUTCHINSON-GILFORD PROGERIA SYNDROME. **Ji-Eun Park**

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EXTRACELLULAR MATRIX STIFFNESS SUPPRESSES GROWTH, BUT INDUCES GENOMIC INSTABILITY AND VARIATION IN CANCER SPHEROIDS. **Alisya Anlas**, Brandon Hayes, Mai Wang, Markus T. Sprenger, Dennis E. Discher

L3302-Pos Board LB52
SUN2 ACTS AS A MECHANOSENSOR FOR FIBROTIC RESPONSE. **Aya Nassereddine**, Van Anh Tran, Jyot Antani, Megan King, Valerie Horsley

Excitation-Contraction Coupling (Boards LB53 - LB57)

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BASAL O-GLCNACYLATION IS ESSENTIAL TO ENSURE PROPER ELECTRICAL ACTIVITY AND CALCIUM HANDLING IN RAT VENTRICULAR CARDIOMYOCYTES. Matthieu DOUARD, Emma Abell, Floriane Bibault, Sabine Charron, Pierre Dos Santos, Ed White, Fanny Vaillant, **Fabien Brette**

L3304-Pos Board LB54
ESTROGENS PREVENTS THE FORMATION OF TUBULAR AGGREGATES IN MALE MICE. Giorgia Rastelli, Matteo Serano, Barbara Girolami, Laura Pietrangelo, Simona Boncompagni, **Feliciano Protasi**

L3305-Pos Board LB55
INVESTIGATION OF THE LONG-TERM E-C COUPLING RESPONSE TO MAVACAMTEN ON HUMAN ENGINEERED HEART TISSUES FROM *MYBPC3*-HCM ISOGENIC CELL LINES. Marianna Langione, Lucrezia Giammarino, Irma Della Corte, Beatrice Scellini, Sonette Steczina, Valentina Spinelli, Elisabetta Cerbai, Chiara Tesi, Michael Regnier, Corrado Poggesi, Raffaele Coppini, Cecilia Ferrantini, **J. Manuel Pioner**

L3306-Pos Board LB56
FRET MEASUREMENTS OF THE POSITIONING OF THE CAV1.1 COMPLEX RELATIVE TO RYR1. **Danielle M. Heebner**, Matt J. Graham, Kurt G. Beam

L3307-Pos Board LB57
ENHANCED NCX1 ACTIVITY DECREASES ABNORMAL CALCIUM-HANDLING UNDER CONDITIONS OF ELEVATED INTRACELLULAR SODIUM. **Kyle Scranton**, Scott John, Marina Angelini, Rui Zhang, Joshua I. Goldhaber, Riccardo Olcese, Michela Ottolia

Ion Channel Regulatory Mechanisms (Boards LB58 - LB61)

L3308-Pos Board LB58
DUAL PATTERN OF CHOLESTEROL-INDUCED DECOUPLING OF RESIDUE-RESIDUE INTERACTIONS OF KIR2.2. **Katie M. Beverley**, Nicolas Barbera, Irena Levitan

L3309-Pos Board LB59
THE INTERPLAY OF LIPIDS AND COLD SENSING IN STHK, A CYCLIC NUCLEOTIDE-GATED ION CHANNEL. **Chieh-Chin Li**, Crina M. Nimigean

L3310-Pos Board LB60
LIPID-INDUCED HYDROPHOBIC GATING IN POTASSIUM CHANNEL. **Lucia Coronel**, Giovanni Di Muccio, Alberto Giacomello, Vincenzo Carnevale

L3311-Pos Board LB61
MOLECULAR DYNAMICS SIMULATIONS OF GATING BY MEMBERS OF THE OSCA/TMEM63 FAMILY OF MECHANICALLY ACTIVATED ION CHANNELS. **Harper E. Smith**, Marcos M. Sotomayor

Ion Channels, Pharmacology, and Disease (Boards LB62 - LB69)

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THERMO TRP ION CHANNELS AS A KEY MOLECULAR AND FUNCTIONAL LANDMARK FOR NEUROPATHIC PAIN TRANSDUCTION IN SUBSETS OF SOMATOSENSORY NEURONS. **Angela Lamberti**

L3313-Pos Board LB63
NOVEL GAIN-OF-FUNCTION MUTATION IN THE KV11.1 CHANNEL FOUND IN PATIENT WITH BRUGADA SYNDROME AND MILD QT SHORTENING. **Olga S. Sokolova**, Bowen Li, Han Zhang, Ekaterina Kravchuk, Tatiana Nesterova, Denis Abramochkin, Elena Zaklyazminskaya

L3314-Pos Board LB64
CRYO-EM STRUCTURES OF CLC-K IN COMPLEX WITH SMALL-MOLECULE INHIBITORS TO BOLSTER DEVELOPMENT OF DRUGS AGAINST HYPONATREMIA. **Juergen Kreiter**, Natasa Trifkovic, Chih-Ta Chien, Daniel Collins, Andrew Hinman, Mark Smith, Wah Chiu, Merritt Maduke

L3315-Pos Board LB65
IDENTIFICATION AND FUNCTIONAL EVALUATION OF GRIA4 MISSENSE VARIANTS IN PATIENTS WITH INTELLECTUAL DISABILITY. **Dan Zhao**, Allan Bayat, Kristine Bonde, Anders S. Kristensen, Stuart C. Candy, Mark Farrant, Ian Coombs

L3316-Pos Board LB66
USING AUTOMATED PATCH CLAMP TECHNOLOGY TO ASSESS VGCC FUNCTION AND MODULATION BY CANNABINOIDS. **Kyle R. Jensen**

L3317-Pos Board LB67
MOLECULAR DYNAMICS CHARACTERIZATION OF CONNEXIN-47 AND THE PATHOGENESIS OF TWO AMINO ACID VARIANTS. **David Gong**, Deepak Kumar, Yun Lyna Luo, Charles K. Abrams

L3318-Pos Board LB68
A CELL- AND ORGANELLE-TARGETABLE THALLIUM INDICATOR FOR FLUORESCENCE-BASED ION CHANNEL ASSAYS. Miguel Macias Contreras, Jessica Granados, **Derek Hernandez**

L3319-Pos Board LB69
EXPLOITING ALPHA9ALPHA10 NICOTINIC RECEPTORS AS DRUG DISCOVERY TARGETS FOR NEUROPATHIC PAIN. Kyle M. Kremiller, Gauri C. Kulkarni, Lauren M. Harris, Hirushi T. Gunasekara Kalu Arachchige, Ying Hu, Zaijie J. Wang, Andrew P. Riley, **Christian J. Peters**

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ENDOGENOUS TAGGING OF THE PROTON CHANNEL AND SOUR RECEPTOR OTOP1 REVEALS ITS APICAL LOCALIZATION IN TASTE RECEPTOR CELLS. **Joshua P. Kaplan**, Ziyu Liang, Heather Kileen, Paul Cohen, Emily R. Liman

L3321-Pos Board LB71
ROLES OF CALHM CHANNELS: EXPLORING ATP RELEASE HEMICHANNEL VS. ELECTRICAL GAP JUNCTION, OR BOTH? **Jae Won Kwon**, Young Keul Jeon, Sung Joon Kim

L3322-Pos Board LB72
REGULATION OF SELECTIVITY FILTER GATING IN THE MODEL SYSTEM OF MINIMAL VIRAL POTASSIUM CHANNELS. Nils Drexler, Ulf-Peter Hansen, **Indra Schroeder**

L3323-Pos Board LB73
SYNTHESIS BY SONOCHEMICAL CUTTING AND DEFECT-INDUCED CHEMICAL CUTTING, AND ION TRANSPORT PROPERTIES OF SURFACTANT-STABILIZED CARBON NANOTUBE PORINS(CNTPS) AND CUT FLUORESCENT ULTRASHORT NANOTUBES(CUT FUNS). **Sidi Zhao**, Alice J. Gillen, Yuhao Li, YuHuang Wang, Aleksandr Noy

Microtubules, Structure, Dynamics, and Associated Proteins (Boards LB74 - LB81)

L3324-Pos Board LB74
DRUG SCREENING IN HUMAN PHYSIOLOGIC MEDIUM IDENTIFIES URIC ACID AS AN INHIBITOR OF RIGOSERTIB EFFICACY. **Prarthana Prashanth**, Vipin Rawat

L3325-Pos Board LB75
STRUCTURAL AND DYNAMIC VISUALIZATION OF THE INTERACTION BETWEEN THE MICROTUBULE ASSOCIATED PROTEIN 7 (MAP7) AND MICROTUBULES. Agnes Adler, Mamata Bangera, J. Wouter Beugelink, Salima Bahri, Marc Baldus, **Carolyn A. Moores**

L3326-Pos Board LB76
IDENTIFYING AXONEMAL PROTEINS AND INTERACTIONS ESSENTIAL FOR PARASITIC MOTILITY. **Matthew H. Doran**, Shimi Meleppattu, Peter Ren, Adrian Coscia, Alan Brown

L3327-Pos Board LB77
EVOLUTIONARY STRUCTURAL COMPARISON OF SPERM FLAGELLA BASED ON *IN SITU* CRYO-EM. **Jianwei Zeng**

L3328-Pos Board LB78
SSNA1 REGULATES MICROTUBULE STABILITY VIA INTERACTIONS WITH THE MICROTUBULE LATTICE. **Laura B. Richardson**, Elizabeth J. Lawrence, Marija Zanic

L3329-Pos Board LB79
EMERGENCE OF AXONAL MICROTUBULE PATTERNS THROUGH SELF-ORGANIZATION: A COMPUTATIONAL STUDY. **Calvin T. Sprouse**, Stephanie L. Denton, Christopher W. Manry, Bridie D. Eckel, Peter W. Baas, Erin M. Craig

L3330-Pos Board LB80
ELUCIDATING THE ROLE OF MICROTUBULE CROSSOVERS IN MICROTUBULE NETWORK REORGANIZATION. **Abdullah Bashar Sami**, Marija Zanic

L3331-Pos Board LB81
THEORETICAL MODEL OF MICROTUBULE POLARITY PATTERN FORMATION IN AXONS. **Rafe W. Habedank**, Bridie D. Eckel, Peter W. Baas, Erin M. Craig

Myosins (Boards LB82 - LB87)

L3332-Pos Board LB82
IMPACT OF VENTRICULAR LIGHT CHAINS ON HUMAN BETA-CARDIAC MYOSIN INTRINSIC MOTOR ACTIVITY. **Skylar M.L. Bodt**, Christopher M. Yengo

L3333-Pos Board LB83
FUNCTIONAL INSIGHT INTO*EH*MYOSIN-1B: THE UNCONVENTIONAL ACTIN CYTOSKELETON MOTOR PROTEIN FROM*E. HISTOLYTICA*. **Gourinath Samudrala**, Preeti Umarao, Philip Bleicher, James R. Sellers

L3334-Pos Board LB84
BIUXX. **Seung-Beom Oh**

L3335-Pos Board LB85
MYOSIN 2A-DRIVEN PLANAR CELL DIVISION ENSURES LUMEN INTEGRITY IN INTESTINAL ORGANOIDS. **John A. Hammer**, Sulaiman Yousafzai, Kirsten Remmert, Christopher J. Alexander, Antonio Pedrosa, Lelia Boley, Anjelika Gasilina, Yang-In Yim, Xufeng S. Wu

L3336-Pos Board LB86
IN VITRO STUDY OF REGULATORY LIGHT CHAIN EXCHANGE IN NON-MUSCLE MYOSIN II MOTORS. **Hannah S. Mirshahi**, Mohammad Ashikur Rahman, James R. Sellers

L3337-Pos Board LB87
MODELING THE MECHANICAL AND CHEMICAL INTERACTIONS BETWEEN NON-MUSCLE MYOSIN II AND ACTIN FILAMENTS. **Nathan Zimmerberg**, Garegin A. Papoian

Optical Microscopy and Superresolution Imaging (Boards LB88 - LB100)

L3338-Pos Board LB88
SAMPLE PARALLELIZATION IN SINGLE MOLECULE MICROSCOPY WITHIN A LARGE FIELD OF VIEW. **Michael J. Martinez**, Evan L. Taylor, Scott Young, James A. Brozik, Andrew J. Thompson

L3339-Pos Board LB89
LABEL-FREE IMAGING OF CHROMATIN DYNAMICS BY INTERFEROMETRIC SCATTERING CORRELATION SPECTROSCOPY. Yi-Teng Hsiao, I-Hsin Liao, Bo-Kuan Wu, Hsueh-Ping Chu, **Chia-Lung Hsieh**

L3340-Pos Board LB90
FLUORESCENCE ENHANCEMENT OF FLUOROPHORES IN LIVE CELLS USING METALLIC NANOPARTICLES. **Marco Locarno**, Qiangrui Dong, Xin Meng, Cristiano Glessi, Daan Brinks

L3341-Pos Board LB91
MODULATING TRANSLATION DYNAMICS THROUGH PROTEIN TETHERING. **Gretchen Fixen**, Gabriel Galindo

L3342-Pos Board LB92
SUPER-RESOLUTION VIBRATIONAL MICROSCOPY BY STIMULATED RAMAN EXCITED FLUORESCENCE. **Naixin Qian**, Wei Min

L3343-Pos Board LB93
A STRATEGY FOR QUANTIFYING THE CONFORMATIONAL CHANGES OF SINGLE MOLECULES IN LIVE CELLS. Bei Liu, Nick Pinkin, Saygin Gulec, **Pengning Xu**, Klaus M. Hahn

L3344-Pos Board LB94
VOLUMETRIC IMAGING OF HUMAN RETROVIRUS ASSEMBLY WITH DEEP LEARNING. **John Kohler**, Kwang Ho Hur, Jesse Donahue, Rayna M. Addabbo, Joachim D. Mueller

L3345-Pos Board LB95
COMPARATIVE ANALYSIS OF ON/OFF RATES IN DNA-PAINT WITH VARIED BINDING MOTIFS. **Dirgh Shah**, Gloria W. Lau, Paul R. Selvin

L3346-Pos Board LB96
DIRECT MEASUREMENT OF THE STRENGTH OF PROTEIN-PROTEIN INTERACTIONS BY FRET IN LIVING *E. COLI CELLS*. **Soojung Yi**, Nam Ki Lee

L3347-Pos Board LB97
TUNABLE TIRF MICROSCOPY ENABLING ILLUMINATION ADAPTABILITY IN DEPTH ON THE INDEPENDENT REGION IN THE FIELD-OF-VIEW. **Yundon Jeong**, Taeseong Woo, Brian Choi, Joo Hun Kang, Jung-Hoon Park

L3348-Pos Board LB98
MINFLUX TRACKING AT THE NANOMETER/MILLISECOND SCALE. **Jan Otto Wirth**, Lukas Scheiderer, Jessica Matthias, Eva Schentarra, Tobias Engelhardt, Johann Engelhardt, Victor Macarrón-Palacios, Miroslaw Tarnawski, Stefan W. Hell

L3349-Pos Board LB99
SINGLE-PARTICLE INVESTIGATIONS OF THE DRUG'S PARTITION BEHAVIOR AND DYNAMICS USING FLUORESCENCE MICROSCOPY: TOWARDS A BETTER DRUG DELIVERY AND RELEASE. **Mary K. McDonald**, Mac Crimmins, Khanh-Hoa Tran-Ba

L3350-Pos Board LB100
MULTIMODAL MICROSCOPE FOR 3D SINGLE-MOLECULE SUPER-RESOLUTION IMAGING THROUGHOUT MAMMALIAN CELLS. **Sofia Vargas-Hernandez**, Tyler E. Nelson, Margareth Freire, Siyang Cheng, Anna-Karin Gustavsson

Single-Molecule Spectroscopy (Boards LB101 - LB102)

L3351-Pos Board LB101
MULTI SPEED IMAGE CORRELATION SPECTROSCOPY. **Benjamin Clark**, Jose Castaneda, Sharonda LeBlanc

L3352-Pos Board LB102
RESOLVING THE MEMBRANE BINDING AND TRANSLOCATION OF BOTULINUM NEUROTOXINS WITH SINGLE MOLECULE FLUORESCENCE. **Changcheng Zhang**, Mark E. Bowen

Bioengineering (Boards LB103 - LB107)

L3353-Pos Board LB103
EXPLORATION OF THE NUCLEATION PATHWAY FOR SUPRAMOLECULAR FIBERS. **Phu Tang**, Sharon M. Loverde, Prabir Khatua, Vincenzo Carnevale

L3354-Pos Board LB104
COMPUTATIONALLY DESIGNED ACE2 DECOY EXHIBITS BROAD EFFICACY AGAINST SARS-COV-2 OMICRON VARIANTS AND RELATED VIRUSES IN VITRO AND IN VIVO. **Shahidul M. Islam**, Brandon Havranek, Erik Procko, Atsushi Hoshino, Toru Okamoto

L3355-Pos Board LB105
SINGLE-MOLECULE CHARACTERIZATION OF LYNX PROTEIN - NICOTINIC ACETYLCHOLINE RECEPTOR INTERACTIONS. **Qian Mu**, X. Frank Zhang

L3356-Pos Board LB106
A NOVEL PLUG-AND-PLAY FAB-PROTEIN G PAIR PLATFORM WITH MULTIFUNCTIONAL CAPABILITIES. **Tomasz Slezak**, Kelly O'Leary, Anthony A. Kossiakoff

L3357-Pos Board LB107
AN INTEGRATED IN-SILICO AND IN-VITRO STUDY OF THE ADHESION DYNAMICS OF ERYTHROPHAGOCYTOSIS IN SICKLE CELL DISEASE. **Guansheng Li**, George E. Karniadakis

TUESDAY LATE POSTERS

1:45 PM–3:45 PM, Exhibit Hall AB

All abstracts are available through the desktop planner and mobile app.

Posters should be mounted beginning at 6:00 PM on Monday and removed NO LATER THAN 4:00 PM on Tuesday evening. Posters will be on view until 10:00 PM the night before presentation. On Tuesday the Exhibit Hall will close completely at 4:00 PM to accommodate the tear down of exhibits. **ALL POSTERS MUST BE REMOVED BY THIS TIME.** Posters remaining on boards after that time will be discarded. Posters being presented on Wednesday may be mounted beginning at 7:00 AM on Wednesday. Board numbers indicate where boards are located in the Exhibit Hall.

Late posters are to be placed on boards beginning with "LB".
These boards are located on the right-hand side of the Exhibit Hall.

Odd-Numbered Boards 1:45 PM–2:45 PM | Even-Numbered Boards 2:45 PM–3:45 PM

Board Numbers	Category
Board LB1 - LB9	Protein Structure and Conformation III
Board LB10 - LB15	Protein Assemblies
Board LB16 - LB24	Protein Dynamics and Allostery
Board LB25 - LB28	Enzyme Function, Cofactors, and Post-translational Modifications
Board LB29 - LB34	Condensates: Physical Properties and Modeling
Board LB35 - LB37	Ribosomes and Translation
Board LB38 - LB42	Chromatin and the Nucleoid
Board LB43 - LB43	Protein-Lipid Interactions: Channels
Board LB44 - LB53	Exocytosis and Endocytosis
Board LB54 - LB54	Cardiac, Smooth, and Skeletal Muscle Electrophysiology
Board LB55 - LB55	TRP Channels
Board LB56 - LB60	Smooth Muscle and Cardiac Muscle Mechanics and Structure
Board LB61 - LB69	Cell Mechanics, Mechanosensing, and Motility
Board LB70 - LB71	Molecular and Cellular Neuroscience
Board LB72 - LB72	Neuroscience: Experimental Approaches and Tools
Board LB73 - LB74	EPR and NMR: Spectroscopy and Imaging
Board LB75 - LB80	Electron Microscopy
Board LB81 - LB99	Computational Methods and Machine Learning, Artificial Intelligence, and Bioinformatics
Board LB100 - LB104	Biosensors

It is the responsibility of the poster presenters to remove print materials from the board after their presentations. Please do not leave materials or belongings under poster boards or in the poster area. Posters will not be collected or stored for pick-up at a later time. The Biophysical Society is not responsible for any articles left in the poster area.

Tuesday Late Posters (Boards LB1 - LB104)

Protein Structure and Conformation III (Boards LB1 - LB9)

L3358-Pos Board LB1
FURTHER OPTIMIZATION AND VALIDATION OF CLASSIC DRUDE POLARIZABLE PROTEIN FORCE FIELD TARGETING THE EQUILIBRIUM BETWEEN THE FOLDED AND UNFOLDED STATES OF INTRINSICALLY DISORDERED PEPTIDES. **Suvankar Ghosh**, Alexander D. MacKerell

L3359-Pos Board LB2
STRUCTURAL ANALYSIS OF INHIBITORY MECHANISM OF QUERCETIN, NATURAL FLAVONOID TO HUMAN CK2A. **Anna Cho**, Danbi Yoon, Jiho Yoo

L3360-Pos Board LB3
STRUCTURAL ANALYSIS OF ANTI-MALARIA EFFECT OF CX-4945 BY THE INHIBITION OF PFCK2A. **Hye Joon Boo**, Anna Cho, Yujeong Choi, Jiho Yoo

L3361-Pos Board LB4
CRYO-EM STRUCTURE OF *PLASMODIUM* APICOPLAST SSB. **Anamika Kumari**

L3362-Pos Board LB5
RESOLVING AN IN SITU STRUCTURE OF THE HIV-1 ENV PRE-HAIRPIN FUSION INTERMEDIATE USING CRYO-ELECTRON TOMOGRAPHY. **Madeleine C. Duquette**, Farhaz Shaikh, Pryanthi Gnanapragasama, Joshua Hutchings, Michael Kay, Christopher O. Barnes, Pamela J. Bjorkman, Elizabeth Villa

L3363-Pos Board LB6
A NETWORK OF PROTON TRANSFER CHANNELS IN THE CENTRAL AXIS OF LIPOLYTICA COMPLEX I. **Panyue Wang**, Jackson Demaray, Stanislav S. Moroz, Alexei A. Stuchebrukhov

L3364-Pos Board LB7
SPECIES SPECIFIC CONFORMATIONAL CHANGES IN LEUKOTRIENE ALPHA-4 HYDROLASE UPON INHIBITOR-BINDING CHARACTERIZED BY SMALL ANGLE X-RAY SCATTERING AND COMPUTATIONAL ANALYSES. Mahmudul Hasan, Gert-Jan Bekker, **Sandhya P. Tiwari**, Kenji Mizuguchi, Marjolein Thunnissen

L3365-Pos Board LB8
STRUCTURAL BASIS OF ACINETOBACTER TYPE IV PILI TARGETING BY AN SSRNA VIRUS AP205. Ran Meng, **Zhongliang Xing**, Jeng-Yih Chang, Zihao Yu, Jirapat Thongchol, Wen Xiao, Yuhang Wang, Karthik Chamakura, Zhiqi Zeng, Fengbin Wang, Ry Young, Lanying Zeng, Junjie Zhang

L3366-Pos Board LB9
INVESTIGATING TAD PILUS ASSEMBLY AND ITS RNA VIRUS INTERACTION PROMPTS EXPLORATION OF POTENTIAL APPLICATIONS. **Yuhang Wang**, Matthew Theodore, Zhongliang Xing, Utkarsh Narsaria, Lanying Zeng, Junjie Zhang

Protein Assemblies (Boards LB10 - LB15)

L3367-Pos Board LB10
INSIGHTS INTO CAPSID ASSEMBLY OF THE T=9 D3 BACTERIOPHAGE. **Anna Belford**, Alexis Huet, Josh Maurer, Robert Duda, James Conway

L3368-Pos Board LB11
IMAGING VESICULAR DYNAMICS AND INTRACELLULAR IL-2 IN ACTIVATED JURKAT T CELLS. **Badeia Saed**, Neal Ramseier, Thilini Perera, Jacob Burnett, Ying Hu

L3369-Pos Board LB12
PROTEIN STABILIZATION PLAYS A KEY ROLE IN SIGNALING BY BACTERIAL CHEMOTAXIS RECEPTOR COMPLEXES. Jessica Allen, Thomas Tran, Katherine Wahlbeck, Isabella Jankowski, **Lynmarie K. Thompson**

L3370-Pos Board LB13
MAPPING THE COLON CANCER PROTEASOME INTERACTOME USING *IN SITU* CROSSLINKING MASS SPECTROMETRY OF ENDOGENOUS PROTEIN COMPLEXES. **Kitaik Lee**, Katerina Atallah-Yunes, Hitendra Negi, Kylie Walters, Francis J. O'Reilly

L3371-Pos Board LB14
NATIVE-NANOBLEACH DETERMINES THE OLIGOMERIC DISTRIBUTION OF ORGANELLAR MEMBRANE PROTEINS AT NANOSCALE SPATIAL RESOLUTION. **Gerard Walker**, Megan C. King, Patrick Lusk, Assaf Alon, Moitrayee Bhattacharyya

L3372-Pos Board LB15
WHAT GOES 'RIGHT' AND 'WRONG' DURING VIRUS SELF-ASSEMBLY. **LaNell Williams**, Andreas Neophytou, Dwaipayan Chakrabarti, Vinothan N. Manoharan

Protein Dynamics and Allostery (Boards LB16 - LB24)

L3373-Pos Board LB16
TWO CORONAVIRUS HELICASES BIND TO THE POLYMERASE SEQUENTIALLY AND THE SECOND SPEEDS UP RNA SYNTHESIS. **Pim P.B. America**, Subhas C. Bera, David Dulin

L3374-Pos Board LB17
INSIGHT INTO THE BIOPHYSICAL NATURE OF CALMODULIN THROUGH THE LENSE OF DISEASE ASSOCIATED MUTATIONS. **Sara A. Garcia**, Justin R. Lovett, Emily M. Campbell, Christopher N. Johnson

L3375-Pos Board LB18
DECRYPTING ALLOSTERY IN MEMBRANE-BOUND K-RAS4B USING COMPLEMENTARY *IN SILICO*APPROACHES BASED ON UNBIASED MOLECULAR DYNAMICS SIMULATION. **Matteo Castelli**, Filippo Marchetti, Silvia Osuna, Sofia A.F. Oliveira, Adrian J. Mulholland, Stefano A. Serapian, Giorgio Colombo

L3376-Pos Board LB19
SYSTEMATIC COARSE-GRAINING SCHEME TO PRESERVE SLOW MOLECULAR KINETICS FOR PROTEINS. **Wangfei Yang**, Cecilia Clementi, Frank Noé, Clark Templeton, David Rosenberger, Andreas Bittracher, Feliks Nüske

L3377-Pos Board LB20
COMPUTATIONAL ANALYSIS PIPELINE IDENTIFIES DIMERIZATION INTERFACE CONTACTS THAT INFLUENCE ACTIVATION IN A CLASS C GPCR. **Sam Sabaat**, Naomi R. Latorraca, Susan Marqusee, Ehud Y. Isacoff

L3378-Pos Board LB21
A UNIFICATION OF ALLOSTERIC MECHANISMS. **Eric Rouviere**, Olivier Rivoire, Rama Ranganathan

L3379-Pos Board LB22
DYNAMIC AND STRUCTURAL INSIGHTS INTO ALLOSTERIC REGULATION OF DUAL-SPECIFICITY PHOSPHATASE MKP5. **Federica Maschietto**, Erin Skeens, Manjula Ramu, Victor S. Batista, George Lisi, Elias J. Lolis, Anton Bennet

L3380-Pos Board LB23
INSIGHTS INTO THE STRUCTURE, FUNCTION, AND DYNAMICS OF A PROMISING BIOCATALYST: CHLOROTHALONIL DEHALOGENASE. **Grayson Gerlich**

L3381-Pos Board LB24
MEMBRANES SHAPE THE BETA-ARRESTIN CONFORMATIONAL LANDSCAPE TO CONTROL GPCR DESENSITIZATION. **John Janetzko**, Yuqi Shi, Jonathan C. Deutsch, Weijing Liu, Asuka Inoue, Dirk H. Seipe, Matthieu Masureel, Steven Chu, Rosa Viner, Brian K. Kobilka, Rabindra V. Shivnaraine

Enzyme Function, Cofactors, and Post-translational Modifications (Boards LB25 - LB28)

L3382-Pos Board LB25
MOLECULAR CHARACTERIZATION OF THE SIRTUIN FAMILY IN ZEBRAFISH: TOWARD UNDERSTANDING THEIR ROLE IN TISSUE REGENERATION. **Chika Koishihara**, Satoru Yamamoto, Ryosuke Wakabayashi, Kotoha Kimura, Kyoshiro Tsuge, Akira Shimamoto

L3383-Pos Board LB26
STRUCTURE, KINETICS, AND MECHANISM OF A FASTER, NON-METAL DEPENDENT 5-CARBOXYVANILLIC ACID DECARBOXYLASE FROM SPHINGOMONAS PAUCIMOBILIS SYK6, LIGW2. **Paul Wolski**, Andy DeGiovanni, Blake A. Simmons, Paul D. Adams, Jose H. Pereira, Kenneth Sale, Kenneth Sale

L3384-Pos Board LB27
THE GCE4ALL CENTER: THE LIMITS OF PROTEIN ENGINEERING IN CELLS USING GENETIC CODE EXPANSION. **Ryan A. Mehl**

L3385-Pos Board LB28
EMERGING ENGINEERING DESIGN PRINCIPLES FOR NONCANONICAL COFACTOR UTILIZATION. **Emma Luu**, Justin B. Siegel

Condensates: Physical Properties and Modeling (Boards LB29 - LB34)

L3386-Pos Board LB29
THE EVENING COMPLEX EXPOSED: HOW ELF3'S DYNAMICS SHAPE TEMPERATURE SENSITIVITY IN PLANTS. **Richard J. Lindsay**, Philip A. Wigge, Sonya M. Hanson

L3387-Pos Board LB30
EXPLORING THE MECHANISMS OF MISCIBILITY AND IMMISCIBILITY IN PROTEIN CONDENSATES. **Pilong Li**

L3388-Pos Board LB31
THE IMPACT OF MULTIPLE ATTRACTIONS ON LIQUID-LIQUID PHASE SEPARATION. **Gabrielle Abraham**, Tianhao Li, William M. Jacobs, Peter J. Chung, Omar A. Saleh

L3389-Pos Board LB32
SPATIAL CHARACTERISTICS OF RNA POL II CLUSTERING IN MESC NUCLEI. **Jonah Galeota-Sprung**, Ganesh Pandey, Alisha Budhathoki, Filmon Medhanie, Jan-Hendrik Spille

L3390-Pos Board LB33
MODULAR EXPLORATION OF THE ROLE OF ARGININES IN RGG MOTIF CONDENSATES. **Anna Geissmann**, Shana Elbaum, Rein Ulijn

L3391-Pos Board LB34
ANOMALOUS COARSENING OF COALESCING NUCLEOLI IN HUMAN CELLS. Giorgi Arsenadze, Christina M. Caragine, Taylor Coakley, Iraj Eshghi, Yuwei Yang, Alex Wofford, **Alexandra Zidovska**

Ribosomes and Translation (Boards LB35 - LB37)

L3392-Pos Board LB35
STUDYING COTRANSLATIONAL FOLDING USING ARREST PEPTIDE ASSAY IN LIVE HUMAN CELLS. **Hannah Haller Hidalgo**, Xiuqi Chen, Kamena Kostova, Christian M. Kaiser

L3393-Pos Board LB36
SINGLE-MOLECULE DYNAMICS AND REGULATION OF RIBOSOME SCANNING ON EUKARYOTIC MESSENGER RNAS. **Hea Jin Hong**

L3394-Pos Board LB37
SINGLE-MOLECULE DYNAMICS OF MRNA RECOGNITION BY HUMAN EIF4F. **Alexandra N. Huang**, Hea Jin Hong, Arrmund Neal, Duo Xu, Rong Hai, Seán O'Leary

Chromatin and the Nucleoid (Boards LB38 - LB42)

L3395-Pos Board LB38
BEYOND COMPACTION: DISSECTING THE ROLE OF DISULFIDE BONDS IN THE DENSE PACKAGING OF MAMMALIAN SPERM DNA. **Jason E. DeRouchey**

L3396-Pos Board LB39
PHASE SEGREGATION OF AB COMPARTMENTS MODULATED BY LAMINA-CHROMATIN INTERACTION. **Esteban Dodero-Rojas**, Matheus F. Mello, José N. Onuchic, Vinicius Contessoto

L3397-Pos Board LB40
TWO DOT1 ENZYMES COOPERATIVELY MEDIATE EFFICIENT UBIQUITIN-INDEPENDENT HISTONE H3 LYSINE 76 TRI-METHYLATION IN KINETOPLASTIDS. Victoria S. Frisbie, Hideharu Hashimoto, Yixuan Xie, Francisca N. De Luna Vitorino, Josue Baeza, Tam Nguyen, Zhangerjiao Yuan, Janna Kiselar, Benjamin A. Garcia, **Erik W. Debler**

L3398-Pos Board LB41
EXPLORING DIVERSE NUCLEOSOME BINDING MODES OF H1 SUBTYPES . **Nicholas R. Rugelis**, Jeffrey Hayes

L3399-Pos Board LB42
THE SYNERGY BETWEEN COMPARTMENTALIZATION AND MOTORIZATION IN CHROMATIN ARCHITECTURE. **Ronaldo J. Oliveira**, Vinicius G. Contessoto, Antonio B. Oliveira Jr, José N. Onuchic

Protein-Lipid Interactions: Channels (Boards LB43 - LB43)

L3400-Pos Board LB43
HOMOLOGY MODELING AND NON-EQUILIBRIUM MOLECULAR DYNAMICS INVESTIGATION OF PIP2 AND CAM BINDING IN KV7.2/KV7.3 VOLTAGE-GATED POTASSIUM CHANNELS. **Cade Duckworth**, Emad Tajkhorshid

Exocytosis and Endocytosis (Boards LB44 - LB53)

L3401-Pos Board LB44
DIRECT OBSERVATION OF LIPID NANOPARTICLES LOADING EFFICIENCY, RELEASE KINETICS AND CELLULAR ENTRY PATHWAYS BY SINGLE PARTICLE STUDIES. **Stavroula Margaritaki**, Sara V. Bleshøy, Styliani Tzompanaki, Emily W. Sørensen, Nikos S. Hatzakis

L3402-Pos Board LB45
FRET-BASED ANALYSIS OF CONFORMATIONAL CHANGES IN SYNTAXIN-1 ON THE PLASMA MEMBRANE. **Kazuki Obashi**, Marie-Paule Strub, Justin W. Taraska

L3403-Pos Board LB46
GPCR CARGO MODIFIES LIPID ORDER IN CLATHRIN-COATED PITS. **G Aditya Kumar**, Yousef Bagheri, Manojkumar A. Puthenveedu

L3404-Pos Board LB47
TOWARDS A STRUCTURAL UNDERSTANDING OF DOC2B-MEDIATED SPONTANEOUS RELEASE. **Cyrus Rastegar**, Julia Powell, Josep Rizo

L3405-Pos Board LB48
CHARACTERIZING INTERMEDIATES IN DYNAMIN-MEDIATED FISSION USING TEMPERATURE SENSITIVE MUTANTS IN DROSOPHILA. **Prasanthi Kunamaneni**, Kem A. Sochacki, Nasser M. Rusan, Jenny E. Hinshaw, Justin W. Taraska

L3406-Pos Board LB49
SYNAPTOTAGMIN 7 OUTPERFORMS SYNAPTOTAGMIN 1 TO PROMOTE THE FORMATION OF LARGE, STABLE FUSION PORES VIA ROBUST MEMBRANE PENETRATION. **Kevin C. Courtney**, Taraknath Mandal, Nikunj Mehta, Lanxi Wu, Yueqi Li, Debasis Das, Qiang Cui, Edwin R. Chapman

L3407-Pos Board LB50
CALCIUM BINDING PROTEIN 5 (CABP5) MODULATES EXOCYTOSIS AND SYNTAXIN3B PHOSPHORYLATION. **Ruth Heidelberger**, Maxim Kozhemyakin, Hongyan Li

L3408-Pos Board LB51
STRUCTURAL STUDIES OF DYNAMIN 3 BY CRYOEM. **Jonathan T. Harrison**, Nidhi Kundu, Jenny E. Hinshaw

L3409-Pos Board LB52
MOLECULAR BASIS OF COUPLING CA^{2+}-SENSING TO FAST MEMBRANE FUSION BY SYNAPTOTAGMIN-1 IN NEUROTRANSMITTER RELEASE. **Klaudia Jaczynska**, Victoria Esser, Junjie Xu, Xiaofen Liu, Weiwei Wang, Josep Rizo

L3410-Pos Board LB53
EFFECT OF BIOPHYSICAL FACTORS ON CLATHRIN COATED VESICLE FORMATION. **Jie Yuan**, Tomasz J. Nawara, Caroline Tran, Alexa L. Mattheyses

Cardiac, Smooth, and Skeletal Muscle Electrophysiology (Boards LB54 - LB54)

L3411-Pos Board LB54
DEVELOPMENT OF A RECOMBINANT EXPRESSION SYSTEM FOR IMPERACALCIN AND ITS VARIANTS TO INVESTIGATE THEIR STRUCTURE-FUNCTION RELATIONSHIP WITH RYANODINE RECEPTORS. **Li Xiao**, Carmen R. Valdivia, Wenxuan Cai, Filip Van Petegem, Hector H. Valdivia

TRP Channels (Boards LB55 - LB55)

L3412-Pos Board LB55
SYNTHETIC NANOBODIES AS TOOLS TO STUDY LYSOSOMAL ION CHANNELS. **Sacha P. Salphati**, Bethan A. Cole, Ruth A. Pumroy, Jo L. Parker, Melike Lakadamyali, Stephen J. Tucker, Esther B.E. Becker, Vera Moiseenkova-Bell, Simon Newstead

Smooth Muscle and Cardiac Muscle Mechanics and Structure (Boards LB56 - LB60)

L3413-Pos Board LB56
MODELING DSG2 MUTATION-ASSOCIATED ARRHYTHMOGENIC RIGHT VENTRICULAR DYSPLASIA (ARVD) USING HUMAN IPSC-DERIVED CARDIAC MICROTISSUES. Chi Yen Lee, **Chenyu Huang**

L3414-Pos Board LB57
EXPLORING FORMATION OF THE MYOSIN INTERACTING-HEADS MOTIF BY EM: EFFECT OF DILATED CARDIOMYOPATHY E525K MUTATION AND MAVACAMTEN ON MYOSIN CONSTRUCTS. **Ruchi Gautam Sharma**, Arun Kumar Somavarapu, Jinghua Ge, Skylar M.L. Bodt, Christopher M. Yengo, Roger Craig, Raul Padron

L3415-Pos Board LB58
MULTISCALE SIMULATIONS PREDICT THAT INCREASING THE NUMBER OF HALF-SARCOMERES IN SERIES CHANGES THE BIPHASIC TIME COURSE OF MYOFIBRIL RELAXATION. **Hannah Laney**, Kenneth S. Campbell, Caterina Squarci

L3416-Pos Board LB59
TROPONIN STRUCTURAL DYNAMICS IN THE NATIVE CARDIAC THIN FILAMENT REVEALED BY CRYO ELECTRON MICROSCOPY. Cristina M. Risi, Jennifer Atherton, Isabella Leite Coscarella, Howard D. White, Prescott B. Chase, Jose R. Pinto, **Vitold E. Galkin**

L3417-Pos Board LB60
QUANTIFYING MYOFIBRIL ORGANIZATION AND IMPACT OF MAVACAMTEN ON MYOCYTE CONTRACTION IN HIPSC MODEL. **Alison S. Vander Roest**

Cell Mechanics, Mechanosensing, and Motility (Boards LB61 - LB69)

L3418-Pos Board LB61
DAPHNIA MAGNA LOCOMOTION UNDER THE INFLUENCE OF DOPAMINE AGONIST. Moumita Dasgupta, **Eleanor Flynn**, Leon Armbruster, Edwin Panora

L3419-Pos Board LB62
MITOCHONDRIA-ER CA^{2+} CROSSTALK REGULATES CELL CONTRACTION. **Xuan Fang**, Lee D. Troughton, Stephano Sala, Daniel Kahn, Margaret A. Bennett, Yongjun Kou, Seth L. Robia, Aleksey V. Zima, Jordan R. Beach, Patrick W. Oakes, Jonathan P. Davis, Peter Kekenes-Huskey

L3420-Pos Board LB63
NANOSCALE MOTION, MACROSCALE CHALLENGE: QUANTIFYING HEMOZOIN DYNAMICS IN THE FOOD VACUOLE OF MALARIA PARASITES. **Erica Hastings**

L3421-Pos Board LB64
CHANGES IN OVARIAN HARDNESS AND ELASTICITY AFFECT THE DEVELOPMENT AND FUNCTION OF SECONDARY FOLLICLE. **Tomoko Kawai**, Masayuki Shimada, Keiji Naruse

L3422-Pos Board LB65
TISSUE FLUIDITY: A DOUBLE-EDGED SWORD FOR MULTICELLULAR PATTERNING. **Rikki M. Garner**, Antoine A. Ruzette, Sean E. McGeary, Allon M. Klein, Sean G. Megason

L3423-Pos Board LB66
LIVE CELL FORCE DYNAMICS - DO CELL MEMBRANES SUPPORT OR RESIST TENSION PROPAGATION? Henry De Belly, **Shannon Yan**, Hudson Borja da Rocha, Sacha Ichbiah, Jason P. Town, Patrick Zager, Dorothy C. Estrada, Kirstin Meyer, Hervé Turlier, Carlos J. Bustamante, Orion Weiner

L3424-Pos Board LB67
MOVEMENT OF CHARGED TRANSMEMBRANE PROTEINS AS A SENSOR FOR GALVANOTAXIS. **Tara E. Eustis**, Nathan M. Belliveau, Julie Theriot

L3425-Pos Board LB68
THE NHE1 SODIUM/HYDROGEN EXCHANGE PUMP AND THE MECHANICAL MICROENVIRONMENT INFLUENCE MACROMOLECULAR CROWDING DURING NEUTROPHIL MIGRATION. **Chao Jiang**, Tamas Nagy, Orion Weiner, Liam J. Holt

L3426-Pos Board LB69
MODELING THE DYNAMICS OF FURROW INVAGINATION DURING *DROSOPHILA* CELLULARIZATION. **Kyle T. Stark**, Mayte Bonilla-Quintana, Anna Marie Sokac, Padmini Rangamani

Molecular and Cellular Neuroscience (Boards LB70 - LB71)

L3427-Pos Board LB70
MAM-LOCALISED ALPHA-SYNUCLEIN ALTERS TRANSMITOPHAGY BY REGULATING MITOCHONDRIAL DYNAMICS. **Elisabeth Fritsch**, Melissa Birol

L3428-Pos Board LB71
DENDRITIC SPINE VARIATION IN WILD-TYPE AND ALZHEIMER'S DISEASE MOUSE MODEL. **Wenbin Nie**, Rohit M. Vaidya, Paul R. Selvin

Neuroscience: Experimental Approaches and Tools (Boards LB72 - LB72)

L3429-Pos Board LB72
TOWARDS MORE PHYSIOLOGICAL ASSAYS: USING HIGH THROUGHPUT AUTOMATED PATCH CLAMP FOR COMPOUND SCREENING IN PRIMARY HIPPOCAMPAL NEURONS. Konstantina Bampali, Kim Boddum, **Mads P. Korsgaard**, Matthäus Willeit, Margot Ernst, Petrine Wellendorph

EPR and NMR: Spectroscopy and Imaging (Boards LB73 - LB74)

L3430-Pos Board LB73
NMR MEASUREMENTS OF TRANSMEMBRANE WATER EXCHANGE, HOMEOSTASIS, AND THE STATE OF NEURAL TISSUE. **Nathan H. Williamson**, Rea Ravin, Teddy X. Cai, Peter J. Basser

L3431-Pos Board LB74
ADVANCEMENTS IN EPR TECHNOLOGY AND METHODOLOGY ENHANCE SENSITIVITY AND THROUGHPUT. **Austin Gamble Jarvi**, Troy W. Borneman

Electron Microscopy (Boards LB75 - LB80)

L3432-Pos Board LB75
EXTRACELLULAR CYTOCHROME NANOWIRES APPEAR TO BE UBIQUITOUS IN PROKARYOTES. Diana Baquero, Virginija Cvirkaite-Krupovic, Jessie Fields, Edward H. Egelman, Mart Krupovic, **Fengbin Wang**

L3433-Pos Board LB76
ENABLING REAL-TIME DATA OPTIMIZATION FOR CRYO-EM WITH SMART EPU. **Edward Pryor**, Fanis Grollios, Holger Kohr

L3434-Pos Board LB77
CRYO CORRELATIVE FIB MILLING USING METEOR, AN INTEGRATED FLUORESCENT MICROSCOPE. **Marit Smeets**, Deniz Daviran, Jordan Ledbetter, Ben Lich, Sander Den Hoedt

L3435-Pos Board LB78
QUANTIFYING HETEROGENEITY IN CRYO-EM: TWO METRICS FOR PROBABILITY DISTRIBUTIONS ON CONTINUOUS CONFORMATIONAL SPACE. **Geoffrey Woollard**, Miro A. Astore, Khanh Dao Duc, Pilar Cossio, Sonya M. Hanson

L3436-Pos Board LB79
EVALUATION OF THE COST-EFFECTIVENESS IN HIGH RESOLUTION SUBTOMOGRAM AVERAGING USING CHAPERONIN MMCPN. **Yanyan Zhao**

L3437-Pos Board LB80
CRYO-ET AND SUB-TOMOGRAM AVERAGING OF TY1 RETROTRANSPOSON CAPSIDS. **Bryan Sibert**, Adam Hannon-Hatfield, David J. Garfinkel, Elizabeth R. Wright

Computational Methods and Machine Learning, Artificial Intelligence, and Bioinformatics (Boards LB81 - LB99)

L3438-Pos Board LB81
ON THE PREFERRED DNA JUXTAPOSITION GEOMETRY BY TYPE II TOPOISOMERASE DURING THE STRAND PASSAGE ACTIVITY. **Mihirkumar N. Prajapati**, Yeonee Seol, Jonathan E. Silver, Siddhartha Das, Keir C. Neuman

L3439-Pos Board LB82
DATA-DRIVEN DESIGN OF THERAPEUTIC HELICAL PEPTIDES. **Christopher Llynard D. Ortiz**, Lee-Wei Yang

L3440-Pos Board LB83
KINETIC CO-EVOLUTIONARY MODELS PREDICT THE TEMPORAL EMERGENCE OF HIV RESISTANCE MUTATIONS UNDER DRUG SELECTION PRESSURE. Avik Biswas, **Indrani Choudhuri**, Eddy Arnold, Dmitry Lyumkis, Allan Haldane, Ronald M. Levy

L3441-Pos Board LB84
UTILIZATION OF PATTERN SEARCH IN THE SEROTYPE PREDICTION OF*SALMONELLA* SPECIES. **Sruthi Sundaresan**, Thenmalarchelvi Rathinavelan

L3442-Pos Board LB85
FOUR-DIMENSIONAL IMAGING TECHNIQUE TO RECONSTRUCT PROTEIN CONFORMATIONAL CHANGE USING CRYO-ELECTRON MICROSCOPY EXPERIMENT. **Takashi Yoshidome**

L3443-Pos Board LB86
AUTOMATED OPTIMIZATION OF FORCE FIELD PARAMETERS AGAINST ENSEMBLE-AVERAGED MEASUREMENTS WITH BAYESIAN INFERENCE OF CONFORMATIONAL POPULATIONS. **Robert Raddi**, Vincent Voelz

L3444-Pos Board LB87
CAPTURING WATER NETWORKS DURING LIGAND BINDING WITH THE SITE-IDENTIFICATION BY LIGAND COMPETITIVE SATURATION APPROACH. **Anmol Kumar**, Himanshu Goel, Wenbo Yu, Alexander D. MacKerell

L3445-Pos Board LB88
IMPROVING MACHINE LEARNING EMPIRICAL PKA PREDICTION BY DATASET REFINEMENT. **Ada Y. Chen**, Juyong Lee, Ana Damjanovic, Bernard R. Brooks

L3446-Pos Board LB89
SEMI-AUTOMATED TEXTURE-BASED SEGMENTATION IN 3D ELECTRON MICROSCOPE IMAGES. **Jed Yang**, Joshua Kim, Maria A. Aronova, Richard D. Leapman

L3447-Pos Board LB90
CYBERSHUTTLE FOR BIOMOLECULAR MODELING: END-TO-END CYBERINFRASTRUCTURE TO ACCELERATE SCIENTIFIC DISCOVERY. Eroma Abeysinghe, Marcus Christie, Diego E. Barreto Gomes, David J. Hardy, **Barry Israelewitz**, Mariano Spivak, John E. Stone, Dimuthu Wannipurage, Sudhakar Pamidighantam, Rafael C. Bernardi, Emad Tajkhorshid, Suresh Marru

L3448-Pos Board LB91
A THEORETICAL AND EXPERIMENTAL STUDY OF THE ORTHOSILICIC ACID UNDER ELECTROSTATIC FIELD AND LASER IRRADIATION. Giovanni Novi Inverardi, Matteo De Tullio, **Francesco Carnovale**, Gianluca Lattanzi, Simone Taioli, Angela Vella, Tommaso Morresi

L3449-Pos Board LB92
ENHANCED MONTE CARLO METHOD FOR SAMPLING OF INTRINSICALLY DISORDERED PROTEINS. **Borna Novak**, Alex S. Holehouse

L3450-Pos Board LB93
NEURAL RELATIONAL INFERENCE MODELS FOR OPTIMIZED VIRTUAL SCREENING OF LARGE-SCALE SMALL MOLECULE LIBRARIES USING DYNAMIC STRUCTURE-BASED PHARMACOPHORE MODELS FOR THE TREATMENT OF YB-1 MEDIATED DRUG RESISTANCE. **Lalehan Oktay**, Ehsan Sayyah, Serdar Durdagi

L3451-Pos Board LB94
FINDING PATHWAYS IN MOLECULAR DYNAMICS SIMULATIONS USING MACHINE LEARNING AND GRAPH METHODS. Miriam Jäger, Victor Tänzel, Fabian Rohrbach, Simon Bray, **Steffen Wolf**

L3452-Pos Board LB95
THE EFFECT OF EPISTASIS ON PHYLOGENETIC TREE SHAPE. **Mina Mahboubi**

L3453-Pos Board LB96
THE FAST AND THE FEWEST: ACCELERATING THE COMPARISON OF MOLECULAR CONFORMATIONS AND CRYOEM IMAGES WITH HIERARCHICAL CLUSTERING. **Jake Moomaw**, Erik H. Thiede

L3454-Pos Board LB97
EFFECTS OF PHYLOGENY ON THE PERFORMANCE OF GENERATIVE PROTEIN SEQUENCE MODELS. **Kisan Khatri**, Allan Haldane, Ronald M. Levy

L3455-Pos Board LB98
DISSECTING THE PATHWAYS AND MECHANISMS OF DRUG RESISTANCE EVOLUTION IN HIV. **Avik Biswas**, Indrani Choudhuri, Zelin Shan, Allan Haldane, Ronald M. Levy, Dmitry Lyumkis

L3456-Pos Board LB99
EXPLORING THE LIGHT-EMITTING AGENTS IN RENILLA LUCIFERASES BY AN EFFECTIVE QM/MM APPROACH. **Aoxuan Zhang**

Biosensors (Boards LB100 - LB104)

L3457-Pos Board LB100
IDENTIFICATION AND DISULFIDE BOND DETECTION OF A PEPTIDE BIOMARKER AND ITS ENANTIOMER BY NANOPORE. **Laura R. Ratinho**, Laurent Bacri, Bénédicte Thiebot, Benjamin Cressiot, Juan Pelta

L3458-Pos Board LB101
RATINA: A ORGANELLE TARGETING SODIUM PROBE REPORTS LYSOSOMAL ION CHANNEL ACTIVITY AND C. ELEGANS SALT TOLERANCE. **Junyi Zou**, Koushambi Mitra, Palapuravan Anees, Daphne Oettinger, Joseph R. Ramirez, Aneesh Tazhe Veetil, Priyanka Dutta Gupta, Rajini Rao, Jayson J. Smith, Paschalis Kratsios, Yamuna Krishnan

L3459-Pos Board LB102
BIOLUMINESCENCE IMAGING OF POTASSIUM ION USING A SENSORY LUCIFERIN AND AN ENGINEERED LUCIFERASE. **Shengyu Zhao**

L3460-Pos Board LB103
HIGH-THROUGHPUT DIGITAL BIODETECTION. Selim Unlu, **Mete Aslan**

L3461-Pos Board LB104
ENGINEERED NANOPORES FEATURING CATIONIC MUTATIONS FOR PROTEIN SENSING APPLICATION. Luning Yu, Xinqi Kang, Zhuoyu Zhang, **Rik Dhar**, Meni Wanunu

WEDNESDAY LATE POSTERS

10:30 AM–12:30 PM, Exhibit Hall AB

All abstracts are available through the desktop planner and mobile app.

Posters should be mounted between 7:00 AM and 8:00 AM on Wednesday and removed by 3:00 PM. Board numbers indicate where boards are located in the Exhibit Hall.

Late posters are to be placed on boards beginning with "LB".
These boards are located on the right-hand side of the Exhibit Hall.

Odd-Numbered Boards 10:30 AM–11:30 AM | Even-Numbered Boards 11:30 AM–12:30 PM

Board Numbers	Category
Board LB1 - LB9	Protein Structure and Conformation IV
Board LB10 - LB22	Protein-Small Molecule Interactions
Board LB23 - LB28	Membrane Protein Dynamics
Board LB29 - LB34	Protein Aggregates
Board LB35 - LB38	DNA Structure and Dynamics
Board LB39 - LB42	Protein-Nucleic Acid Interactions
Board LB43 - LB48	Membrane Dynamics
Board LB49 - LB56	Membrane Active Peptides
Board LB57 - LB63	Calcium Signaling
Board LB64 - LB65	Muscle Regulation
Board LB66 - LB70	Mitochondria in Cell Life and Death
Board LB71 - LB78	Voltage-gated K Channels
Board LB79 - LB85	Ligand-Gated Channels
Board LB86 - LB91	Actin Structure, Dynamics, and Associated Proteins
Board LB92 - LB92	Cytoskeletal Assemblies and Dynamics
Board LB93 - LB95	Bacterial Mechanics, Cytoskeleton, and Motility
Board LB96 - LB98	Modeling of Biological Systems
Board LB99 - LB101	Biomaterials
Board LB102 - LB102	Biophysics Education

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Wednesday Late Posters (Boards LB1 - LB102)

Protein Structure and Conformation IV (Boards LB1 - LB9)

L3462-Pos Board LB1
STRUCTURAL AND SIGNALING MECHANISMS OF TAARS ENABLED PREFERENTIAL AGONIST DESIGN. **Jie Cheng**, Xiao Yu, Zhao Yang

L3463-Pos Board LB2
EAR MUFFS FOR ELEPHANTS: RATIONAL ENGINEERING OF CONFORMATIONAL DYNAMICS WITH BACKBONE MODIFICATION. **Jacob Wolfe**, W. Seth Horne

L3464-Pos Board LB3
STRUCTURAL STUDIES OF ORPHAN PROTEINS INVOLVED IN HOST-PARASITE INTERACTIONS. **Fatema Bhinderwala**, Aishwarya Koregaonkar, David L. Stern, Angela M. Gronenborn

L3465-Pos Board LB4
PROTEIN STRUCTURAL CONSEQUENCES OF AMINO ACID VARIANTS ASSOCIATED WITH AUTOIMMUNE INFLAMMATORY BOWEL DISEASE. Chang Chen, Nora Y. Sun, **Constance Jeffery**

L3466-Pos Board LB5
DECIPHERING THE MOLECULAR MECHANISMS OF BPTF INTERACTIONS WITH NUCLEOSOMES VIA MOLECULAR SIMULATIONS. **Ryan F. Hebert**, Jeffery M. Wereszczynski

L3467-Pos Board LB6
REFINING ELASTIC NETWORK MODELS TO PREDICT PROTEIN MECHANICS. **Ayanna M. Matthews**, Allison Craig, Claire A. Hornburg, Ikchang Cho, C. W. Wilburn, Yichao Guan, Stephen Gee, Isaiah Thomas, Reyna Houston, Adam T. Hammond

L3468-Pos Board LB7
STRUCTURAL STUDIES OF THE MOONLIGHTING PROTEIN "PHOSPHOGLUCOSE ISOMERASE" FROM *PSEUDOMONAS AERUGINOSA*. **Kedar Sharma**, Haritha Dilip, Thomas Stanley, Robert Petrovich, Sivapriya Kirubakaran, Vijay Thiruvenkatam, Mario J. Borgnia

L3469-Pos Board LB8
THE STRUCTURAL BASIS FOR HUMAN MUSCLE PFK REGULATION. **Lauren E. Salay**, Eric M. Lynch, Tanushri Kumar, Miles Sasha Dickinson, Joel Quispe, Bradley A. Webb, Justin M. Kollman

L3470-Pos Board LB9
INSIGHT BEHIND CALCIUM INDUCED CONFORMATIONAL TRANSITION IN CALMODULIN. **Ritaban Halder**

Protein-Small Molecule Interactions (Boards LB10 - LB22)

L3471-Pos Board LB10
INVESTIGATING HUBR2 BINDING DOMAIN SUBSTRATE SPECIFICITY USING X-RAY CRYSTALLOGRAPHY AND FLUORESCENCE POLARIZATION ASSAY. **Shih-Ting Huang**, Jian Wu, Susan S. Taylor, Yuan Chen

L3472-Pos Board LB11
APPLICATION OF HYDROGEN DEUTERIUM EXCHANGE MASS SPECTROMETRY TOWARDS QUANTIFYING PROTEIN EXCIPIENT INTERACTIONS. **Agbooma Uwakweh**, Asuka Orr, Xun Li, Ahmad Kiani Karanji, Stephen Hoag, Alexander MacKerell, Daniel Deredge

L3473-Pos Board LB12
MOLECULE DYNAMICS SIMULATION STUDY ON ACE2 BINDING WITH SARS-COV-2 MUTANTS. George Rucker, Hong Qin, Ishrat Jahan, **Liqun Zhang**

L3474-Pos Board LB13
MOLECULAR DYNAMICS SIMULATIONS OF RADIOPHARMACEUTICALS INTERACTING WITH SOMATOSTATIN RECEPTOR 2. Silvia Gervasoni, Isilay Öztürk, Camilla Guccione, Andrea Bosin, Paolo Ruggerone, **Giuliano Malloci**

L3475-Pos Board LB14
BIOPHYSICS IN DNA-ENCODED LIBRARY SCREENING AND HIT VALIDATION. **Karanbir S. Pahil**, Mark Mantell, Keith E. Van Allen, Nicholas Abuid, Perry Ripa, Chunhao Tu, Jeff Messer, Joshua Alper

L3476-Pos Board LB15
BIOPHYSICAL CHARACTERIZATION OF SMALL MOLECULE-PROTEIN INTERACTIONS ON BIOSENSORS AND LIVING CELLS. Irene Ponzo, Alice Soldà, Agnes Marszal, **Antonio Di Meco**, Vivien Hafner, Nena Matscheko, Ulrich Rant

L3477-Pos Board LB16
SEEING THE UNSEEN - DYNAMIC WATER MOLECULES IN PHOTOSYSTEM II WATER CHANNELS AND THEIR FUNCTIONAL ROLES INVESTIGATED WITH MOLECULAR DYNAMICS. **Zhuoran Long**, Jinchan Liu, Victor S. Batista

L3478-Pos Board LB17
CHARACTERIZATION OF CARDIOMYOPATHIC POINT MUTATIONS IN THE IG3 DOMAIN OF MYOPALLADIN. **Alia M. Michaelis**

L3479-Pos Board LB18
EXPLORING LIPID AND LIGAND FLIP-FLOP ON THE SURFACE OF A GPCR: A MARTINI 3 STUDY. **Cristina Gil Herrero**, Sebastian Thallmair

L3480-Pos Board LB19
VIRTUAL SCREENING FOR SMALL MOLECULE BINDERS OF NAV1.7'S VSD4 ALLOSTERIC SITE FOR POTENTIAL USE AS NON-OPIOID ANALGESICS. Blorya Aronova, Giovanni Barcia, Zachary Katz, Ovadia Babakhanov, Talia Friedman, **Thomas W. Comollo**

L3481-Pos Board LB20
MOLECULAR DETERMINANT OF SNX482/KV4.3 BINDING IDENTIFIED BY UNCONSTRAINED-MULTISCALE MOLECULAR DYNAMIC SIMULATIONS. Guido Mellado, **Jonathan Saavedra**, Jose A. Garate, Alan Neely

L3482-Pos Board LB21
A STRUCTURE-BASED STUDY TARGETING THE NAV1.6/GSK3B PROTEIN-PROTEIN INTERACTION COMPLEX. **Akanksha Gurtu**, Zahra Haghighijoo, Timothy Baumgartner, Rani C. Chellappa, Krishna Rajarathnam, Mark A. White, Fernanda Laezza

L3483-Pos Board LB22
MOLECULAR DYNAMICS SIMULATIONS OF BINDING OF ROPINIROLE ANALOGS TO THE D2 AND D3 G-PROTIEN COUPLED RECEPTORS. **Kai Zwink**, Christopher Beaudry, Juan M. Vanegas

Membrane Protein Dynamics (Boards LB23 - LB28)

L3484-Pos Board LB23
TIME-RESOLVED DYNAMICS OF PLASMA MEMBRANE REPAIR PROTEINS. **Yuta Yamazaki**, Keiko Kono

L3485-Pos Board LB24
MECHANISM FOR RING BIOGENESIS AND LIPID MEMBRANE REPAIR: VIPP1. **Adai Colom Diego**, Andrea Merino, Souvik Naskar, Javier Espadas, Aurelien Roux, Harry Low

L3486-Pos Board LB25
EXPLORING THE EARLY ACTIVATION MECHANISM OF ENDOPLASMIC RETICULUM SENSOR HUMAN IRE1α THROUGH MOLECULAR DYNAMICS SIMULATIONS. **Elena Spinetti**, G. Elif Karagöz, Roberto Covino

L3487-Pos Board LB26
A MEMBRANE MODEL TO MEASURE THE TRANSDUCER FUNCTION OF SIGNAL PROPAGATION ALONG SINGLE-PASS MEMBRANE RECEPTORS. Daniel Wirth, Ece Ozdemir, **Kalina Hristova**

L3488-Pos Board LB27
BINDING DYNAMICS OF GLOBULAR PRPC AND DOPPEL PROTEINS WITH MEMBRANE SURFACES: A COARSE-GRAINED MOLECULAR DYNAMICS STUDY. Noah Greenwood, **James A. Janos**, Mason Borgman, Davis Thalhuber, Frank Luceri, Sofia Acosta, Hunter Stoffel, Patricia Soto

L3489-Pos Board LB28
LEARNING CONTINUOUS 2D DIFFUSION COEFFICIENT MAPS FROM TRAJECTORY DATA. **Vishesh Kumar**, Shep Bryan IV, Carlo Manzo, Steve Pressé

Protein Aggregates (Boards LB29 - LB34)

L3490-Pos Board LB29
BENCHMARKING STUDY OF PEPTIDE SELF-ASSEMBLY WITH MARTINI AND ALL-ATOM FORCE FIELD. **Subhadra Thapa**, Jianing Li, Finley Clark

L3491-Pos Board LB30
NUCLEATION AND GROWTH OF AMYLOID FIBRILS. Sharareh Jalali, Ruoyao Zhang, Mikko P. Haataja, **Cristiano L. Dias**

L3492-Pos Board LB31
YTHDF2 PROMOTES AGGRESOME FORMATION INDEPENDENT OF M6A MODIFICATION. **Geunhee Kim**, Chi-Yeol Song

L3493-Pos Board LB32
UNRAVELING THE STRUCTURAL BASIS OF HERZOG AGGREGATION IN EMBRYONIC DEVELOPMENT USING CRYO-EM. **Mayur Mukhi**, Ruben Hervas

L3494-Pos Board LB33
THE STRUCTURAL BASIS OF PIPSQUEAK AMYLOID ASSEMBLY DURING EMBRYONIC DEVELOPMENT. **Kan Shing Kevin Ng**, Ruben Hervas

L3495-Pos Board LB34
STRUCTURAL INSIGHTS INTO TEMPLATED SEEDING OF TAU DISEASE FIBRILS THROUGH DOUBLE ELECTRON ELECTRON RESONANCE. **Vishnu Vijayan**, Zhikai Zeng, Karen Tsay, Austin Dubose, Matthew P. Frost, Andrew P. Longhini, Athena Quddus, Alexa Albert, Michael Vigers, Amanda L. Woerman, Kenneth S Kosik, Songi Han

DNA Structure and Dynamics (Boards LB35 - LB38)

L3496-Pos Board LB35
MOLECULAR COMPRESSIVE FORCE SENSOR FOR MAPPING FORCES AT THE CELL-SUBSTRATE INTERFACE. **Sarah Al Abdullatif**

L3497-Pos Board LB36
MEASURING THE BENDABILITY OF DNA WITH A SINGLE BASE-PAIR MISMATCH THROUGH SINGLE MOLECULE CYCLIZATION. **Bailey Liu**, Aakash Basu, Thuy T. Ngo, Tunc Kayikcioglu, Taekjip Ha

L3498-Pos Board LB37
EXPLICIT IONS/IMPLICIT WATER GENERALIZED BORN MODEL FOR NUCLEIC ACIDS. **Yegor Kolesnikov**, Yeyue Xiong, Alexey V. Onufriev

L3499-Pos Board LB38
QUANTIFYING THE EFFECT OF POLARITY ON BASE-STACKING ENERGIES IN NUCLEIC ACIDS. **Chai Kam**, Jibin Abraham Punnoose, Ken Halvorsen

Protein-Nucleic Acid Interactions (Boards LB39 - LB42)

L3500-Pos Board LB39
STRUCTURE REVEALS WHY GENOME FOLDING IS NECESSARY FOR SITE-SPECIFIC INTEGRATION OF FOREIGN DNA INTO CRISPR ARRAYS. **Andrew Santiago-Frangos**, William S. Henriques, Tanner Wiegand, Colin C. Gauvin, Murat Buyukyoruk, Ava B. Graham, Royce A. Wilkinson, Lenny Triem, Kasahun Neselu, Edward T. Eng, Gabriel C. Lander, Blake Wiedenheft

L3501-Pos Board LB40
SINGLE-MOLECULE ANALYSIS REVEALS TDG EXHIBITS MULTIPLE MODES OF LINEAR DIFFUSION TO PROCESS 5-FORMYLCYTOSINE. **Brittani L. Schnable**, Matthew A. Schaich, Vera Roginskaya, Liam P. Leary, Tyler M. Weaver, Bret D. Freudenthal, Alexander C. Drohat, Bennett Van Houten

L3502-Pos Board LB41
TIME RESOLVED FLUORESCENCE SPECTROSCOPYREVEALS CONFORMATIONAL DYNAMICS OF NSP15 CLEAVAGE TARGETS. **Kenya Gordon**, Zoe Wright, Meredith Frazier, Isha Wilson, Benjamin Clark, Robin Stanley, Sharonda LeBlanc

L3503-Pos Board LB42
UNVEILING THE SEQUENCE-SPECIFIC RECOGNITION OF N6-METHYLADENOSINE (M^{6A}) IN EUKARYOTIC RNAS. Mohammad R. Rauf, **Aftab U. Mollah**, Sanjaya Abeysirigunawardena

Membrane Dynamics (Boards LB43 - LB48)

L3504-Pos Board LB43
MEMBRANE EXPANSION BY SYNTHETIC ROTARY MOLECULAR MACHINES LEAD TO LARGE-SCALE DEFORMATIONS OF VESICLES. **Yusuf Qutbuddin**, Ainoa Guinart, Svetozar Gavrilovic, Kareem Al Nahas, Ben L. Feringa, Petra Schwille

L3505-Pos Board LB44
EFFECTS OF BACTERIAL SPHINGOLIPIDS ON THE PROPERTIES OF SYNTHETIC LIPOSOMES. **Joshua Chamberlain**, Julianne Griepenburg, Eric Klein

L3506-Pos Board LB45
INFLUENZA A VIRION SHAPE RESPONDS DYNAMICALLY TO CHANGES IN HOST CELL MEMBRANE TENSION. **Anna Jaeggi-Wong**, Ed Partlow, Tijana Ivanovic

L3507-Pos Board LB46
NON-UNIVERSAL IMPACT OF CHOLESTEROL ON MEMBRANES: MOBILITY, CURVATURE SENSING, AND ELASTICITY. **Rainer A. Bockmann**, Marius F.W. Trollmann, Matthias Pöhnl

L3508-Pos Board LB47
SYNTHETIC CONDENSATES OF DNA ORIGAMI INDUCE MEMBRANE HETEROGENEITY AND PHASE SEPARATION. **Weitao Wang**, Rebecca E. Taylor

L3509-Pos Board LB48
TRIGLYCERIDES STABILIZE WATER/ORGANIC INTERFACES OF CHANGING AREA VIA CONFORMATIONAL FLEXIBILITY. **Thomas C. Kinard**, Steven P. Wrenn

Membrane Active Peptides (Boards LB49 - LB56)

L3510-Pos Board LB49
SYNERGY OF LL37 AND COLISTIN PROTECTS MAMMALIAN CELL MEMBRANES FROM LYSIS. **Jing Zhang**, Kaori Sugihara

L3511-Pos Board LB50
ONE RING TO RULE THEM ALL: LUGDUNIN'S DISRUPTIVE EFFECTS. **Marius F.W. Trollmann**, Dominik Ruppelt, Claudia Steinem, Rainer A. Böckmann

L3512-Pos Board LB51
HOW DOES MACOLACIN EVADE COLISTIN RESISTANCE CONFERRED BY LIPID A MODIFICATION. **Shiyu Liu**, Jane Allison

L3513-Pos Board LB52
SYNERGISTIC BACTERICIDAL INTERACTION OF ANTIMICROBIAL PEPTIDE LL-37 AND SMALL BIOACTIVE MOLECULES. **Aditya Upasani**, Ratnasri K, Sridivya Bhagavatula, Satyaghosh Maurya, Twinkle Gupta, Amitabha Majumdar, Morris Waskar, Rahul Roy

L3514-Pos Board LB53
CHARACTERIZATION OF THE PH-SENSITIVE PEPTIDE LAH4 BY PERFUSION-INDUCED ATR-FTIR SPECTROSCOPY. **Mateo Calle-Velasquez**, Eduardo Santamaría, Jesus Salgado, Diego Sampedro, Victor Lorenz-Fonfria

L3515-Pos Board LB54
AGE STRESS INDUCES INCREASED UBIQUINONE 8 PRODUCTION AND LEADS TO PORE FORMATION AND GENERATION OF REACTIVE OXYGEN SPECIES BY THE ANTIMICROBIAL PEPTIDE MAGAININ 2. **Emma Reinhart**, Jonathan A. Azenon, Ryan Zurick, Catherine B. Volle

L3516-Pos Board LB55
TOWARDS UNRAVELING THE PASSIVE CELL-PENETRATING PEPTIDES TRANSLOCATION MECHANISM. **Katarína L. Baxová**, Mattia I. Morandi, Ori Avinoam, Pavel Jungwirth

L3517-Pos Board LB56
STRUCTURAL DETERMINANTS OF PEPTIDE NANOPORE FORMATION. Leisheng Sun, Kalina Hristova, Ana-Nicoleta Bondar, **William C. Wimley**

Calcium Signaling (Boards LB57 - LB63)

L3518-Pos Board LB57
CA^{2+}-DYSREGULATION CAUSED BY A *CALM2* VARIANT CAN BE ASSOCIATED WITH NEURODEVELOPMENTAL DISORDERS IN PATIENTS WITH CATECHOLAMINERGIC POLYMORPHIC VENTRICULAR TACHYCARDIA. **Haruka Inaba**, Tomohiko Ai, Takeru Makiyama, Jingshan Gao, Takashi Miida

L3519-Pos Board LB58
REGULATION OF NEURONAL NR2B EXPRESSION BY THE ASTROCYTE NEURON VESICULAR COUPLING. **Natarajaseenivasan Kalimuthusamy**, Shanmughapriya Santhanam

L3520-Pos Board LB59
SINGLE-MOLECULE STUDY OF BRAKES AND TRANSITIONS CONTROLLING STIM1 ACTIVATION. **Ruoyi Qiu**, Richard S. Lewis

L3521-Pos Board LB60
MODELING IP3-INDUCED CA2+ SIGNALING BASED ON ITS INTERSPIKE INTERVAL STATISTICS. **Martin Falcke**, Victor Nicolai Friedhoff, Benjamin Lindner

L3522-Pos Board LB61
TARGETING BITTER TASTE RECEPTOR 14 TO KILL HEAD AND NECK SQUAMOUS CELL CARCINOMA. **Zoey A. Miller**, Jennifer Jolivert, Ray Ma, Sahil Muthuswami, Arielle Mueller, Ryan Carey, Robert J. Lee

L3523-Pos Board LB62
DISTINCT ROLES OF THE CRITICAL APICAL HELICES OF STIM1 AND STIM2. Mallary L. Groff, Youjun Wang, Donald L. Gill, **Yandong Zhou**

L3524-Pos Board LB63
SHINING LIGHT ON CALCIUM-MEDIATED MORPHOGENESIS: FORWARD ENGINEERING ORGAN DEVELOPMENT WITH OPTOGENETICS AND MECHANOSENSATION. Mayesha S. Mim, Nilay Kumar, Megan Levis, Maria Unger, Gabriel Miranda, **Jeremiah J. Zartman**

Muscle Regulation (Boards LB64 - LB65)

L3525-Pos Board LB64
MTORC1 REGULATION OF PROTEIN SYNTHESIS IN ADULT CARDIOMYOCYTES. **Keita Uchida**, Emily Scarborough, Benjamin L. Prosser

L3526-Pos Board LB65
NUCLEAR ENRICHMENT OF ALDH3A1 AS A MUSCLE TYPE-DEPENDENT DENERVATION MARKER IN ALS MICE. Ang Li, Li Dong, Xuejun Li, Jianxun Yi, **Jingsong Zhou**

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FORCE REMODELS MITOCHONDRIA BY TUNING PROTEIN METABOLISM IN BLOOD DEVELOPMENT. Paulina D. Horton, Sandeep P. Dumbali, Travis I. Moore, **Pamela L. Wenzel**

L3528-Pos Board LB67
LIGHT-SCATTERING ASSAY OF THE MITOCHONDRIAL PERMEABILITY TRANSITION IN THE LIVING CELLS. **Yaw A. Akosah**, Dane Jensen, Evgeny Pavlov

L3529-Pos Board LB68
MITOCHONDRIAL ABNORMALITIES IN DOPAMINERGIC NEURONS OF THE SUBSTANTIA NIGRA INDUCED BY ALPHA-SYNUCLEIN. **Sinead A. O'Sullivan**, Ayse Ulusoy, Rita Pinto-Costa, Shirley S. Lee, Donato A. Di Monte

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INVESTIGATING FIS1 UPREGULATION AS A STRESS RESPONSE IN GLIOBLASTOMA CELLS. **Yuli Buckley**, Maria SK Stoll, Adina Brett-Morris, Jason A Mears

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MUTATION AT THE ENTRANCE OF THE QUINONE CAVITY SEVERELY DISRUPTS QUINONE BINDING IN RESPIRATORY COMPLEX I. **Jason T. Yi**, Panyue Wang, Alexei A. Stuchebrukhov

Voltage-gated K Channels (Boards LB71 - LB78)

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L3539-Pos Board LB78
STRUCTURAL REARRANGEMENTS IN THE UPPER SELECTIVITY FILTER FACILITATE RAPID INACTIVATION IN HERG POTASSIUM CHANNELS. **Mark J. Hunter**, Carus Lau, Toby W. Allen, Eduardo Perozo, Jamie I. Vandenberg

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