

SCIENTIFIC PROGRAM

MAY 13 (WED) DAY 1

13:20-14:20 Session I - Felicia Chen-Wu Memorial Lecture

Moderator David Tai-Wei Wu 吳台偉 Director and Research Fellow, Institute of Chemistry,
Academia Sinica

KN1 ***The Molecular Machinery of Mitochondrial RNA and DNA Decay in Health and Disease***

Hanna S. Yuan 袁小玲 Distinguished Research Fellow, Institute of Molecular
Biology, Academia Sinica

14:20-15:35 Session II - Structure and Function of Enzymes

Chair Meng-Chiao Ho 何孟樵 Associate Research Fellow, Institute of Biological Chemistry,
Academia Sinica

PL1 ***Redesign of Microbial Redox Enzymes for Deployment in Biosensors and Therapeutics***

Karen Allen Professor, Institute of Chemistry & Material Science and
Engineering, Boston University

IL1 ***Crystallographic Evidence for Small Molecule-Induced Disruption of a Zinc-Finger via Covalent Modification of a Zinc-Coordinating Cysteine***

Nei-Li Chan 詹迺立 Professor, Institute of Biochemistry and Molecular Biology,
National Taiwan University

IL2 ***Structural Insights of Light-Driven Magnesium Transportation and Retinal Re-isomerization in Microbial Rhodopsins***

Chii-Shen Yang 楊啓伸 Professor, Department of Biochemical Science & Technology,
National Taiwan University

15:55-17:30 Session III - Disease Targets and Drug Discovery

Chair Shih-Che Sue 蘇士哲 Professor, Institute of Bioinformatics and Structural Biology,
National Tsing Hua University
Hao-Ching Wang 王皓青 Professor, International Ph.D. Program for Translational
Science, Taipei Medical University

PL2 ***From Bench to Clinic: Novel HER2/EGFR Kinase Inhibitor DBPR112***

Hsing-Pang Hsieh 謝興邦 Director, Institute of Biotechnology and Pharmaceutical
Research, National Health Research Institutes

IL3 ***Turning Cancer Stem Cell Vulnerabilities into Therapeutic Opportunities: From PBX1 Targeting to Trojan-Horse Nanomedicine***

Yao-An Shen 沈耀安 Associate Professor, Department of Pathology / Graduate
Institute of Clinical Medicine, Taipei Medical University

IL4 ***AI-Enabled Drug Discovery for Orphan GPCRs***

Chun-Wei Tung 童俊維 Investigator, Institute of Biotechnology and Pharmaceutical
Research, National Health Research Institutes

IL5 ***Structural Basis of Antibody-Mediated B-to-Z DNA Transition: Relevance to Autoimmunity***

Cheng-Chung Lee 李政忠 Associate Research Fellow, The Ph.D. Program for
Translational Medicine, Taipei Medical University

17:30-18:05 Session IV - Taiwan-Japan Joint Session I Advanced Microscopy Technology

Chair Peilin Chen 陳培菱 Research Fellow, Research Center for Applied Sciences,
Academia Sinica

PL3 ***From Millions to One: Trans-Scale Imaging for Rare Cell Discovery***

Takeharu NAGAI Director and Professor, SANKEN, The University of Osaka

09:00-10:15 Session V - Glycan Biosynthesis and Recognition

Chair	Todd L. Lowary 呂桐睿	Distinguished Research Fellow & Director, Institute of Biological Chemistry, Academia Sinica
PL4	<i>Advances in Understanding O-glycopeptidases from Host-Adapted Bacteria: the Complex Role of Ancillary Modules</i>	
	Alisdair Boraston	Professor, Dept. Biochemistry & Microbiology, University of Victoria
IL6	<i>Biosynthesis and Regioselective Alkylation for Glycopeptide Antibiotic Apovarcin</i>	
	Tsung-Lin Li 李宗璘	Professor and Division Director of Chemical Biology, Genomics Research Center, Academia Sinica
IL7	<i>Altering the Carbohydrate-Binding Specificity of the Legume Lectin FRIL Through Structure-Guided Engineering</i>	
	Che Alex Ma 馬徹	Research Fellow and Professor, Genomics Research Center, Academia Sinica

10:35-11:50 Session VI - Time-resolved analyses of Biomacromolecules

Chair	Manuel Maestre Reyna 馬左仲	Assistant Professor, Department of Chemistry, National Taiwan University
PL5	<i>Characterization of Fatty Acid Photodecarboxylase in Zeolitic Imidazolate Frameworks and with Various Substrates</i>	
	Ya-Ting Kao 高雅婷	Associate Professor, Department of Biological Science and Technology, National Yang Ming Chiao Tung University
IL8	<i>XFEL Journey: From Sample Preparation to Time-Resolved Femtosecond Crystallography Using X-ray Free Electron Lasers (XFEL)</i>	
	Jay-How Yang 楊佳豪	Assistant Professor, Department of Biochemistry, National Defense Medical University
IL9	<i>Three-Dimensional Molecular Movies of Structural Changes in Proteins Captured by X-ray Free- Electron Lasers</i>	
	Eriko Nango	Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University

13:15-13:55 Session VII - Taiwan-Japan Joint Session II Advanced Microscopy Technology

Chair	Peilin Chen 陳培菱	Research Fellow, Research Center for Applied Sciences, Academia Sinica
IL10	<i>Molecular Design of Activatable Raman Probes for Multiplexed Bioimaging</i>	
	Mako Kamiya	Professor, Laboratory for Chemistry and Life Science, Institute of Integrated Research, Institute of Science Tokyo
IL11	<i>Radiation-Excitable Fluorescent Proteins: A New Interface Between Ionizing Radiation and Biomolecular Photophysics</i>	
	Keitaro Tanoi	Professor, Graduate School of Agricultural and Life Sciences, The University of Tokyo

14:25-15:25	Session VIII - Taiwan-Japan Joint Session III Advanced Microscopy Technology		
Chair	Hung-Wen Li	李弘文	Professor, Department of Chemistry, National Taiwan University
IL12	<i>Beyond the Diffraction Limit by LightSheet Microscopy</i>		
	Bi-Chang Chen	陳壁彰	Research Fellow, Institute of Cellular and Organismic Biology, Academia Sinica
IL13	<i>Label-Free Interferometric Scattering Microscopy for Quantitative Nanoscale Dynamics in Living Cells</i>		
	Chia-Lung Hsieh	謝佳龍	Research Fellow, Institute of Atomic and Molecular Sciences, Academia Sinica
IL14	<i>From Light to Sound: Engineering Proteins for Non-invasive Control of Deep Brain Circuits</i>		
	Yu-Chun Lin	林玉俊	Distinguished Professor, Institute of Molecular Medicine, National Tsing Hua University

15:45-17:00	Session IX - Probing Intrinsic Disordered/Misfolded Proteins		
Chair	Jie-Rong Huang	黄介嵘	Professor, Institute of Biochemistry and Molecular Biology, National Yang Ming Chiao Tung University
	Orion Shih	施怡之	Associate scientist, Group leader of Soft Matter Science Group, NSRRC
PL6	<i>From Nuisance to Knowledge: Learning Hydration Shell Structure from SAXS and SANS Using Explicit-Solvent MD Simulations</i>		
	Jochen S Hub		Professor, Theoretical Biophysics, Saarland University
IL15	<i>Biophysical and Structural Characterization of an Intrinsically Disordered Protein Catalyzing Amyloidogenesis in Neurodegenerative Diseases</i>		
	Jung-Hsin Lin	林榮信	Research Fellow, Biomedical Translation Research Center & Research Center for Applied Sciences, Academia Sinica
IL16	<i>Active-Site-Independent Inhibition of TREX1 Mediated by Fuzzy Interactions within a Nucleic Acid-Binding Intrinsically Disordered Loop</i>		
	Yu-Yuan Hsiao	蕭育源	Professor / Director, Institute of Molecular Medicine and Bioengineering, National Yang Ming Chiao Tung University

09:00-10:15 Session X - Biophysics of Living and Active Matters

Chair	Keng-hui Lin Tetsuya Hiraiwa	林耿慧 平岩徹也	Research Fellow, Institute of Physics, Academia Sinica Associate Research Fellow, Institute of Physics, Academia Sinica
PL7	<i>Asymmetric Actin Assembly Driven by N-WASP at Saddle-Shaped Membrane Necks</i>		
	Feng-Ching Tsai		Permanent Researcher, CNRS, Institute Curie
IL17	<i>Integrating Min Protein Oscillations into Bacterial Spatial Organization and Physiology</i>		
	Yu-Ling Shih	史有伶	Associate Research Fellow, Institute of Biological Chemistry, Academia Sinica
IL18	<i>Mechano-Energetics of the Cytoskeleton: From F-actin Architecture to Cell Division</i>		
	Ryota Sakamoto		Assistant Research Fellow, Institute of Physics, Academia Sinica

10:35-12:15 Session XI - Protein-protein Interactions: Assemblies and Dynamics

Chair	Chyuan-Chuan Wu Nei-Li Chan	吳權娟 詹迺立	Associate Professor, Department of Biochemistry and Molecular Biology, National Cheng Kung University Distinguished Professor, Institute of Biochemistry and Molecular Biology, College of Medicine, National Taiwan University
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10:35-11:35 Felicia Chen-Wu Memorial Lecture

Moderator	David Tai-Wei Wu	吳台偉	Director and Research Fellow, Institute of Chemistry, Academia Sinica
KN2	<i>The Dance of Protein and DNA in Nucleotide Excision Repair</i>		
	Wei Yang		Distinguished Investigator, Laboratory of Molecular Biology, National Institute of Diabetes and Digestive and Kidney Diseases, NIH

IL19 ***Structural Insights into the Regulation of Human Transcription by the Mediator Complex and its Kinase Module***

	Shin-Fu Chen	陳星甫	Assistant Professor, Department of Biochemistry and Molecular Biology, College of Medicine, Chang Gung University
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IL20 ***Mechanistic Analysis of SMN Polymerization and Its Role in Spinal Muscular Atrophy Pathogenesis***

	Pei-Chun Lin	林珮君	Assistant Professor, Institute of Bioinformatics and Structural Biology, College of Life Science and Medicine, National Tsing Hua University
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14:55-16:30	Session XIII - AI-driven and Computational Protein Science		
Chair	Lee-Wei Yang	楊立威	Professor , Institute of Bioinformatics and Structural Biology, National Tsing Hua University
	Tzu-Hsien Yang	楊子賢	Associate Professor, Department of Biomedical Engineering, National Cheng Kung University
PL8	<i>Removing the Barriers to Integrating Synthetic Biology With Regenerative Medicine</i>		
	Michael J. Garton		Associate Professor, Institute of Biomedical Engineering Faculty of Applied Science & Engineering, University of Toronto
IL21	<i>AI-Driven Immunogenomics: A Scalable Single-Cell Framework with Structural Validation</i>		
	Chien-Yu Chen	陳倩瑜	Professor and Chair, Department of Biomechatronics Engineering, National Taiwan University
IL22	<i>AI-Driven Sequence Optimization for Antimicrobial Peptide Discovery</i>		
	Chia-Ru Chung	鍾佳儒	Assistant Professor, Department of Computer Science & Information Engineering, National Central University
IL23	<i>Patient-Specific Network-Based Interpretable Machine Learning Predicts Immune Checkpoint Inhibitor Response in Cancer Patients</i>		
	Chun-Yu Lin	林峻宇	Associate Professor, Institute of Bioinformatics and Systems Biology, National Yang Ming Chiao Tung University