

2020년 생체분자과학 학회연합 학술대회 (Jan. 09~11, 2020 GIST 오룡관)
2020 Sympoisum of the Federation of Korean Societies for Biomolecular Sciences (FKSBS)

Organized by 한국결정학회, 한국구조생물학회, 한국단백질학회, 한국생물물리학회, 대한화학회 생명화학분과

day 1: Jan. 09, Thursday

10:00 ~ 13:00

Registration

13:00 ~ 13:10

Opening Remarks

박철승 (GIST) 한국생물물리학회 회장

Plenary Lecture 1 Speaker: 오병하 (KAIST) chair: 한국결정학회 부회장 김명희 Location: 다산홀

Plenary Lecture 1 13:10 ~ 13:55 오병하 (KAIST) Computational protein design and its application

GIST-Created New Horizon / Computational Approaches for New Molecular Findings (Parallel, 14:00-15:40)

GIST-Created New Horizon Organizer: 이광록 (GIST) Chair: 이광록 (GIST) Location: 303호

Symposium I (Parallel) 14:00 ~ 14:25 김정욱 (GIST 화학과) Structural basis for the activation and the activity of phosphatidylserine decarboxylase in the biosynthesis of phospholipids
14:25 ~ 14:50 남호정 (GIST 전기전자컴퓨터공학부) AI-powered drug discovery and development
14:50 ~ 15:15 진미선 (GIST 생명과학부) The structural basis of the low catalytic activities of the two minor β -carbonic anhydrases of the filamentous fungus *Aspergillus fumigatus*
15:15 ~ 15:40 이광록 (GIST 생명과학부) Chemical friction along the minor groove of DNA facilitates enzymatic translocation of λ exonuclease via electrostatic ratchet

Computational Approaches for New Molecular Findings Organizer: 유우경 (DGIST) Chair: 유우경 (DGIST) Location: 101호

Symposium II (Parallel) 14:00 ~ 14:25 김윤학 (부산대) ESurv: a user-friendly web server for integrative survival analysis
14:25 ~ 14:50 최정모 (KAIST) The stickers and spacers framework for describing phase behavior of multivalent intrinsically disordered proteins
14:50 ~ 15:15 천무경 (KBRI) A practical application of generative adversarial networks for RNA-seq analysis to predict the molecular progress of Alzheimer's disease
15:15 ~ 15:40 최선 (이화여대) Comprehensive mechanistic studies for the structural and functional elucidation of a tetraspanin arginine sensor

한국생물물리학회 총회 (15:40-16:10) Location: 101호, Coffee Break and Poster Session (15:40-16:50) Location: Lobby

New Horizons in Membrane Signaling and Trafficking / Ionic Transport Mechanism (Parallel, 16:50-18:30)

New Horizons in Membrane Signaling and Trafficking Organizer: 이형호 (서울대) Chair: 엄수현 (GIST) Location: 301호

Symposium III (Parallel) 16:50 ~ 17:15 최희정 (서울대) Biophysical and functional characterization of Frizzled4-mediated Norrin signaling
17:15 ~ 17:40 임영준 (전남대) Structural Mechanism of Intracellular Sterol Distribution by Lipid Transfer Proteins
17:40 ~ 18:05 김한성 (부경대) A Catalytic Trisulfide in Human Sulfide Quinone Oxidoreductase Catalyzes Coenzyme A Persulfide Synthesis and Inhibits Butyrate Oxidation
18:05 ~ 18:30 정가영 (성균관대) Time-resolved Conformational Analysis during GPCR-Gs Coupling

Ionic Transport Mechanisms Organizer: 강동목 (성균관대) Chair: 강동목 (성균관대) Location: 101호

Symposium IV (Parallel) 16:50-18:30 16:50 ~ 17:15 임현호 (KBRI) Coupled ion-transport mechanism in a CLC-type Cl⁻/H⁺ antiporter
17:15 ~ 17:40 이병철 (KBRI) Ion and lipid transport via TMEM16 scramblases
17:40 ~ 18:05 강경진 (성균관대) Analysis of Phototoxin Taste Closely Correlates Nucleophilicity to Type-I Phototoxicity
18:05 ~ 18:30 홍규상 (KIST) Cytoskeleton dependent activation of Tentonin 3/TMEM150C, a novel mechanosensitive channel

Reception & Poster Session (18:30-20:00) Location: Lobby

Day 2: Jan. 10, Friday

New Approaches in Structural Biology / Biomolecular Engineering (Parallel, 09:00-10:40)

New Approaches in Structural Biology Organizer: 최희정 (서울대) Chair: 이원태 (연세대) Location: 303호

Symposium V (Parallel) 9:00-10:40 9:00 ~ 9:25 우재성 (고려대) Cryo-EM Structure of Human Cx31.3/GJC3 Hemichannel
9:25 ~ 9:50 류제경 (TU Delft) AFM imaging of open and collapsed states of yeast condensin suggest a scrunching model for DNA loop extrusion
9:50 ~ 10:15 박석열 (포항가속기) BL11C: a High-flux Micro-MX beamline for micron-sized protein crystals at PAL
10:15 ~ 10:40 김경현 (고려대) Time-resolved pH-induced protein dynamics using serial femtosecond crystallography

Biomolecular Engineering Organizer: 이현수 (서강대) Chair: 이현수 (서강대) Location: 101호

Symposium VI (Parallel) 9:00-10:40 9:00 ~ 9:25 정용원 (KAIST) Supramolecular Biochemistry: engineering artificial protein assemblies
9:25 ~ 9:50 조규봉 (서강대) Visualization of A/T Specific Sequence on a Large DNA Molecule
9:50 ~ 10:15 강세병 (UNIST) Development of Recombinant Secondary Antibody Mimics as Signal Amplifiers in Immunoassays

	10:15 ~ 10:40	안대로 (KIST)	Coffee Break (10:40-11:00)		Location: Lobby
Plenary Lecture 2		Speaker: Dr. Genji Kurisu (PDBj, Osaka Univ)	chair: 김경규 (성균관대)	Location: 다산홀	
Plenary Lecture 2	11:00 ~ 11:50	Dr. Genji Kurisu (PDBj head; Osaka Univ)		Structural Basis for the Ferredoxin-dependent Photosynthetic Electron Transfer	
Luncheon Seminar parallel 1 (12:00-12:50)		Speakers: PDBj	chair: Dr. Genzi Kurisu (PDBj, Osaka Univ)	Location: 303호	
Luncheon 1-1	12:00 ~ 12:25	Dr. Atsushi Nakagawa (PDBj, Osaka Univ)		OneDep: Unified System for Deposition, Biocuration, and Validation of Macromolecular Structures	
Luncheon 1-2	12:25 ~ 12:50	Dr. Nobutoshi Ito (PDBj, Tokyo Medical and Dental Univ)		Mandatory submission of PDBx/mmCIF format files for crystallographic depositions to the Protein Data Bank (PDB)	
Luncheon Seminar parallel 2 (12:00-12:50)		Speaker: 토모큐브(주)		Location: 101호	
Luncheon 2	12:00 ~ 12:50	이수민 (토모큐브)		HOLOTOMOGRAPHY TECHNIQUES FOR NON-INVASIVE LABEL-FREE 3D IMAGING OF LIVE CELLS AND MATERIALS	
Cutting-Edge Technologies for Next-Generation Biomedicine / Young Scientist Session (Parallel, 13:00-15:00)					
Cutting-Edge Technologies for Next-Generation Biomedicine		Organizer: 정상택 (고려대)	Chair: 정상택 (고려대)	Location: 303호	
Symposium VII (Parallel) 13:00-15:05	13:00 ~ 13:25	유동원 (서울대)		Nanomaterials for Bioimaging and Therapeutics	
	13:25 ~ 13:50	서지원 (GIST)		Engineering natural peptides for discovery of novel anti-infectives	
	13:50 ~ 14:15	예경무 (DGIST)		Translational application of infectious libraries of human antibodies	
	14:15 ~ 14:40	정우재 (성균관대)		Multivalent Sialyl Ligands and Their Use in Influenza A Virus Entry Inhibitors	
	14:40 ~ 15:05	김찬혁 (KAIST)		Towards next-generation T cell therapy for Cancer	
Young Scientist Session		Organizers: 학술위원회	Chairs: 최명환 (성균관대), 강진영 (KAIST)	Location: 101호	
Symposium VIII (Parallel) 13:00-15:05	13:00 ~ 13:20	박성준 (KAIST)		Special Talk: Multifunctional Neural Interfaces Technologies	
	13:20 ~ 13:33	유다슬이 (KAIST)		Optogenetic activation of intracellular antibodies for direct modulation of endogenous proteins	
	13:33 ~ 13:46	김지원 (postech)		Application of anti-helix antibodies in protein structure determination	
	13:46 ~ 13:59	이수빈 (Postech)		A Small-Molecule Identified via Forward Chemical Genetics Selectively Kills Cancer Cells	
	13:59 ~ 14:12	허수경 (이화여대)		The Effects of Tumor Suppressor INPP4B Oxidation on Actin Polymerization in Glioma Cells.	
	14:12 ~ 14:25	김희령 (성균관대)		Conformational Analysis of Gi/o α Subunits in GPCR Coupling	
	14:25 ~ 14:38	강민희 (고려대)		Solution Structure of the Nucleotide hydrolase BlsM: Importance of its Substrate Specificity	
	14:38 ~ 14:51	민경진 (서울대)		Structural and functional characterization of a peptidoglycan reshaping peptidase in intestinal pathogens	
	14:51 ~ 15:05	홍승곤 (KBIO)		Structural investigation of Micromonospora echinospora GenB1; relationship between productivity and substrate preference	
Coffee Break (15:05-15:25)		Location: Lobby			
Plenary Lecture 3		Speaker: 장영태 (Postech)	chair: 대한화학회 생명화학분과 정상전 분과장	Location: 다산홀 (잠정)	
Plenary Lecture 3	15:25 ~ 16:10	장영태 (Postech)		Strategy for Cell Discrimination using Fluorescent Probe	
Emerging Technologies on Protein Science / Neuroscience and Imaging (Parallel, 16:20-18:00)					
Emerging Technologies on Protein Science		Organizer: 김승중 (KAIST)	Chair: 김승중 (KAIST)	Location: 303호	
Symposium IX (Parallel) 16:15-17:55	16:15 ~ 16:40	박지용 (IBS)		Advanced MD Simulations that Quantify Target-Inhibitor Interactions: Case Studies of EGFR Kinase Inhibitors and Androgen Receptor Antagonists	
	16:40 ~ 17:05	김진해 (DGIST)		The structural features of transthyretin in its aged aggregation-prone state	
	17:05 ~ 17:30	송은주(이화여대)		Phosphorylation of USP15 and USP4 Regulates Localization and Spliceosomal Deubiquitination	
	17:30 ~ 17:55	김민규 (KAERI)		Inhibitory Activity of Nucleotide-based Metabolites Against Class C β -Lactamases	
Neuroscience and Imaging		Organizer: 김성현 (경희대)	Chair: 김성현 (경희대)	Location: 101호	
Symposium X (Parallel) 16:20-17:55	16:15 ~ 16:40	장재범 (KAIST)		Expansion microscopy techniques and their applications to reveal fine molecular details	
	16:40 ~ 17:05	최명환 (성균관대)		Comprehensive functional screening of taste sensation in vivo	
	17:05 ~ 17:30	김진섭 (성균관대)		Anatomy and connectivity of the cerebellum revealed by electron microscope images	
	17:30 ~ 17:55	김성현 (경희대)		Distinct property of presynaptic physiology between excitatory and inhibitory neurons	
	18:00 ~ 18:10	Special Remarks		박철승 (GIST) 한국생물물리학회 회장 + (학회기간 중 결정될 경우) 차기 연합학회 주관 회장	
Banquet (18:10-20:00)		Location:			

Small Group Collaborative Discussion (9:00-12:00)