

Presentation time is organized by whether the last part (suffix) of Poster Session number is odd/even.

Odd number: 13:50-14:50 Even number: 14:50-15:50

Abstracts marked with * in the abstract number eligible for IUPAB2024 Student and Early Career Researcher Poster Award voting

Ex) *25P-999

Protein: Structure

- 28P-001** **Cryo-EM analysis of human GLUT9**
Daiki Matsushita, Yongchan Lee, Yu Toyoda, Teppei Takada, Tomohiro Nishizawa
Graduate School of Medical Life Science, Yokohama City University, Yokohama, Japan
- 28P-002** **Molecular basis of substrate recognition in human γ -LAT1-CD98hc complex**
Juntaro Nakahara, Yongchang Lee, Natsumi Yoshida, Pattama Wiriyasermkul, Ryo Ekimoto, Mitsunori Ikeguchi, Sushi Nagamori, Tomohiro Nishizawa
Graduate School of Medical Life Science, Yokohama City University
- 28P-003** **Particle formation for nanofiber elongation in Fibroin artificial sequence**
Kento Yonezawa, Chan Kok Sim, Takehiro Sato, Haruya Kajimoto, Kiichi Hayashi, Takuya Sawai, Yusuke Okamoto, Rakuri Aiba, Yuki Nakatani, Kenta Kimura, Yoichi Yamazaki, Sachiko Toma-Fukai, Yugo Hayashi, Hironari Kamikubo
NAIST MS/NAIST CDG
- 28P-004** **Cryo-EM analysis of mouse $b0$,+AT-rBAT complex**
Aoi Maeda, Yongchan Lee, Pattama Wiriyasermkul, Sushi Nagamori, Tomohiro Nishizawa
Graduate School of Medical Life Science, Yokohama City University

Poster Sessions

- 28P-005** **Cryo-EM Structure of MexB-MexY Chimera Protein MexBYB Multidrug Efflux Pump**
Jiye Wang, Kenta Tsutsumi, Ryosuke Nakashima, Kunihiko Nishino, Eiki Yamashita, Atsushi Nakagawa
Institute for Protein Research, Osaka University, Osaka, Japan
- 28P-006** **Investigation of the effect of ATP/ADP for formation of 2-Cys peroxiredoxin (Prx2) high molecular weight complex**
Trang Ngoc Tran, Ryusei Yamada, Hiroki Konno
Graduate School of Frontier Science Initiative, Kanazawa University, Kanazawa, Japan
- 28P-007** **Comprehensive analysis of different fold proteins with similar interfaces**
Takumi Sekine, Kazuo Fujiwara, Masamichi Ikeguchi
Department of Biosciences, Soka University, Hachioji, Japan
- 28P-008** **Solution structure of clock protein complex KaiA-KaiC**
Ken Morishima, Masahiro Shimizu, Ritsuki Sakamoto, Yasuhiro Yunoki, Rintarao Inoue, Masaaki Sugiyama
Institute for Integrated Radiation and Nuclear Science, Kyoto University
- 28P-010** **The brain metabolites, betaine and dimethyl glycine disrupt acetylcholinesterase activity and enhance the inhibitory effect of Donepezil, Rivastigmine, and Galantamine**
Laishram Rajendrakumar Singh, Kritika Kumari
Dr. B. R. Ambedkar Center for Biomedical Research, University of Delhi, Delhi-110007, India
- 28P-011** **Towards serial femtosecond crystallography of metalloproteins with sub-ångström details**
Faisal Koua, Tiankun Zhou, Jay-How Yang, Marcin Sikorski, Jayanath Koliyadu, Mohammed Vakili, Johan Bielecki, Richard Bean, Tokushi Sato, Adrian Mancuso
European XFEL, Schenefeld, Schleswig-Holstein, Germany
- 28P-012** **Structural basis of main proteases of HCoV-229E bound to inhibitor PF-07304814 and PF-07321332**
Qisheng Wang
Shanghai Advanced Research Institute, Chinese Academy of Sciences, Shanghai, 201204, China

Protein: Structure & Function

- 28P-014** **Evidence for an alternative YidC-assisted insertion mode - Exploring a putative parallel YidC dimer.**
Denis Knyazev, Lukas Winter, Andreas Vogt, Sandra Posch, Yavuz Öztürk, Christine Siligan, [Nikolaus Goessweiner-Mohr](#), Nora Hagleitner-Ertugrul, Hans-Georg Koch, Peter Pohl
Institute of Biophysics, Johannes Kepler University Linz, Gruberstrasse 40, A-4020 Linz, Austria
- 28P-015** **Modeling of Photoswitchable Ligands Linked to Physiology**
Wieslaw A Nowak
Department of Biophysics, Institute of Physics, N. Copernicus University in Torun, Poland
- 28P-016** **Identifying functional hotspot residues for activation in M2 muscarinic receptor**
Yuya Sugiura, Tatsuya Ikuta, Yuji Sumii, Hirokazu Tsujimoto, Ryoji Suno, Putri Nur Arina Binti MOHD ARIFF, So Iwata, Norio Shibata, Asuka Inoue, Takuya Kobayashi, Hideki Kandori, [Kota Katayama](#)
Department of Life Science and Applied Chemistry, Nagoya Institute of Technology/OptoBioTechnology Research Center, Nagoya Institute of Technology
- 28P-017** **Aqp5 mutations in patients suffering from palmoplantar keratoderma (Bothnian type)**
[Christine Siligan](#), Helena Zich, Nikolaus Gössweiner-Mohr, Anna Stoib, Peter Pohl
Institute of Biophysics, Johannes Kepler University, Linz, Austria
- 28P-018** **pH-Induced Conformational Dynamics and Oligomeric Assembly of Peroxiredoxin 6: Insights into Catalytic Mechanisms**
[Hamidur Rahaman](#), Shahnaj Sharifun, Kakchingtabam Pushpa
Department of Biotechnology, Manipur University, Indo Myanmar Road, Canchipur, Imphal, India-795003
- 28P-019** **Exploring Covalent Bond Electron Densities in the Active Site of the EcoRV-DNA Complex through QM/MM Metadynamics**
[Hiroki Sato](#), Itaru Onishi, Mika Mitsumatsu, Ryotarou Matsuda, Masayuki Iriisa
Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Japan

Poster Sessions

- 28P-020** **Fantastic Enzymes and where to find them**
Ehmke Pohl, Katy Cornish, Stefanie Freitag-Pohl, Arnthór Aevarsson
Department of Chemistry, Durham University, Durham, DH1 3LE, UK
- 28P-021** **Theoretical study on allosteric control mechanism of a luminescent reaction of bioluminescent protein Aequorin**
Tomohiro Ando, Toshiya Funahashi, Toru Nakatsu, Shigehiko Hayashi
Grad. Sch. of Sci. Kyoto Univ.
- 28P-022** **Correlating single molecule studies with Cryo-EM structures to understand the inner workings of ATP synthase.**
Meghna Sobti, Hiroshi Ueno, Simon Brown, Hiroyuki Noji, Alastair Stewart
Molecular, Structural and Computational Biology Division, The Victor Chang Cardiac Research Institute, Darlinghurst, Australia/St Vincent's Clinical School, Faculty of Medicine, UNSW Sydney, Kensington, Australia.
- 28P-023** **Molecular basis for heat-hypersensitive mutants of ryanodine receptor type 1**
Liu Chujie, Yamazawa Toshiko, Oyama Kotaro, Murayama Takashi, Kobayashi Takuya, Harada Yoshie, Suzuki Madoka
Institute for Protein Research, Osaka University
- 28P-024** **Proton-coupled electron transfer dynamics and ligand binding in the mycobacterial respiratory supercomplex III₂IV₂**
Ana Patricia Gamiz-Hernandez, Daniel Riepl, Terezia Kovalova, Sylwia M. Król, Dan Sjöstrand, Martin Högbom, Peter Brzezinski, Ville R. I. Kaila
Department of Biochemistry and Biophysics, The Arrhenius Laboratories for Natural Sciences, Stockholm University, SE-106 91, Stockholm, Sweden.
- 28P-025** **High-speed AFM observation of collagen degradation process by *Grimontia hollisae* collagenase**
Hayato Yamashita, Keisuke Tanaka, Yuko Ushiki-Kaku, Akihiro Tsuji, Shunji Hattori, Masayuki Abe
Graduate School of Engineering Science, Osaka University
- 28P-026** **Structural basis for the pH-dependent functional regulation of cytochrome b6f complex from *Chlamydomonas reinhardtii***
Akihiro Kawamoto, Hatsuki Tanabe, Shin-Ichiro Ozawa, Hideaki Tanaka, Yuichiro Takahashi, Genji Kurisu
Institute for Protein Research, Osaka University, Japan

- 28P-027** **Structural insights into the elongation complex of RNA polymerase II paused at the +1 nucleosome entrance**
Masahiro Naganuma, Tomoya Kujirai, Haruhiko Ehara, Tamami Uejima, Tomoko Ito, Mie Goto, Mari Aoki, Masami Henmi, Sayako Miyamoto-Kohno, Mikako Shirouzu, Hitoshi Kurumizaka, Shun-ichi Sekine
RIKEN Center for Biosystems Dynamics Research, Yokohama, Japan
- 28P-028** **Positive allosteric modulation of cytochrome c oxidase activity**
Yuya Nishida, Takumi Tateno, Takemasa Nagao, Yasunori Shintani
National Cerebral and Cardiovascular Center, Osaka, Japan
- 28P-029** **The structure and function of the ghrelin receptor coding for drug actions**
Yuki Shiimura, Dohyun Im, Ryosuke Tany, Hidetsugu Asada, Ryoji Kise, Hideko Wakasugi-Masuho, Kazuma Matsui, Jun-ichi Kishikawa, Takayuki Kato, Masayasu Kojima, So Iwata, Ikuo Masuho
Division of Molecular Genetics, Institute of Life Science, Kurume University/ Department of Cell Biology, Graduate School of Medicine, Kyoto University
- 28P-030** **Cracking the code: A computational expedition into neurodegenerative polypeptides and innovative therapies**
Ioana Mariuca Ilie, Simone Ruggeri
University of Amsterdam, The Netherlands
- 28P-031** **Structural and Functional Elucidations of Druggable Viral Macrodomains**
Chun-Hua Hsu
National Taiwan University, Taipei, Taiwan
- 28P-032** **Synthesis of versatile neuromodulatory molecules by a gut microbial glutamate decarboxylase**
Pavani Dadi, Clint Pauling, Abhishek Shrivastava, Dhara D. Shah
School of Mathematical and Natural Sciences, Arizona State University, Glendale, AZ, USA./Biodesign Center for Fundamental and Applied Microbiomics, Arizona State University, Tempe, AZ, USA.
- 28P-033** **An integrated approach using sequential and structural features for precise prediction of protein-protein binding affinity**
Zhongliang Guo, Osamu Muto, Rui Yamaguchi
Aichi Cancer Center Research Institute

Poster Sessions

- 28P-034** **Structure of the human 80S ribosome at 1.9 Å resolution – the molecular role of chemical modifications and ions in RNA**
Charles Barchet, Samuel Holvec, Antony Lechner, Léo Fréchin, Nimali De Silva, Isabelle Hazemann, Philippe Wolff, Ottilie von Loeffelholz, Bruno Klaholz
Centre for Integrative Biology (CBI), Department of Integrated Structural Biology, IGBMC (Institute of Genetics and of Molecular and Cellular Biology), 1 rue Laurent Fries, Illkirch, France/Centre National de la Recherche Scientifique (CNRS) UMR 7104, Illkirch, France/Institut National de la Santé et de la Recherche Médicale (Inserm) U964, Illkirch, France/Université de Strasbourg, Strasbourg, France

Protein: Physical property

- 28P-035** **Amyloid formation of the β 2-microglobulin variants, D76N and V27M: Diverse diseases via a common assembly mechanism**
Masatomo So, Roberto Martinez, Nicolas Guthertz, Martin Wilkinson, Sheena Radford
University of Leeds, Leeds, UK/Kyoto University, Kyoto, Japan
- 28P-036** **Negative Charge Increment during Evolution of Ferritin**
Takumi Kuwata, Yusuke Murakami, Kazuo Fujiwara, Masamichi Ikeguchi
Department of Biosciences, Soka University
- 28P-037** **Prediction of detailed structures over the entire free energy landscape of protein folding using extended statistical mechanical models and restrained simulations**
Koji Ooka, Munehito Arai
College of Arts and Sciences, The University of Tokyo, Tokyo, Japan.
- 28P-038** **Structural studies of protein condensates prepared by ultracentrifugation/air-drying**
Ryuga Someya, Akira Nomoto, Suguru Nishinami, Hiroka Sugai, Kentaro Shiraki
Institute of Pure and Applied Sciences, University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki 305- 8573, Japan

Protein: Function

- 28P-039** **SsUrel is a pH-gated urea channel from *Streptococcus salivarius***
 Anna Stoib, Xenia Fischer, Sandra Posch, Felix Wolkenstein, Sahar Shojaei, Christine Siligan, Nikolaus Goessweiner-Mohr, [Andreas Horner](#)
 Institute of Biophysics, Johannes Kepler University Linz, Gruberstr. 40, 4020 Linz, Austria
- 28P-040** **Effect of the inorganic phosphate on the iron oxidation/mineralization activity of *Escherichia coli* non-heme ferritin A**
[Takumi Kuwata](#), Kazuo Fujiwara, Masamichi Ikeguchi
 Dept. of Biosci. Grad. Sch. of Sci. and Eng. Soka Univ., Tokyo, Japan,
- 28P-041** **Structural Changes of Poly(ethylene terephthalate) undergoing Enzymatic Degradation**
[Daisuke Tadokoro](#), Tomoya Imai
 Reserch Institute of Sustainable Humanosphere, Kyoto University
- 28P-042** **Mode of action of virulence factors of intracellular pathogens studied with time-resolved and high-resolution atomic force microscopy**
[Christian Nehls](#), Thomas Gutsmann
 Research Center Borstel, Division of Biophysics, Borstel, Germany, /Centre for Structural Systems Biology, Hamburg, Germany

Protein: Measurement & Analysis

- 28P-043** **BioSAXS for solution protein structure analysis at SPring-8**
[Satoshi Nagao](#), Hiroyasu Masunaga, Nobutaka Shimizu, Masaki Yamamoto, Hiroshi Sekiguchi
 JASRI/SPring-8
- 28P-044** **Biomolecular Interactions with the NanoTemper Dianthus**
[Stefanie Freitag-Pohl](#), Dorata Gasparikova, Kate V. Sowerby, Abbey M. Butler, Ehmke Pohl
 Department of Chemistry, Durham University, Durham DH1 3LE, UK
- 28P-045** **Easy and fast LLPS size estimation using microplate reader**
[Enomoto Mayu](#), Suai Anzawa, Tadashi Kodama, Kyoko Furuita, Wataru Togawa, Ryoga Kobayashi, Naotaka Sekiyama, Yohei Miyanoiri, Toshimichi Fujiwara, Hidehito Toshio, Chojiro Kojima
 Yokohama National University

Poster Sessions

28P-046 **Spatiotemporal and global profiling of DNA-protein interactions and substrates of lysine-modifying enzymes in living cells**

Minjia Tan, Hao Hu, Wei Hu, An-Di Guo, Linhui Zhai, Xiao-Hua Chen
State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica,
Chinese Academy of Sciences, Shanghai, China

28P-047 **EPR Spectroscopy Combined with Rapid Freeze-Quenching Reveals Relationship Between Temperature Dependence of Active Site Rearrangement and of Activity in Inorganic Pyrophosphatase**

Masaki Horitani, Hiroshi Sugimoto, Yuri Kasu
Saga University

Protein: Design & Engineering

28P-048 **DNA replication triggered by small-molecule for in vitro auto-selection of enzymes**

Thibault Philippe Laurent Di Meo, Yannick Rondelez, Hiroyuki Noji
Noji Laboratory, Department of Applied Chemistry, Graduate School of Engineering,
The University of Tokyo

28P-049 **Generation of antibodies to an extracellular region of the transporters Glut1/Glut4 by immunization with a designed antigen**

Makoto Nakakido, Taichi Sumikawa, Ryo Matsunaga, Daisuke Kuroda,
Satoru Nagatoishi, Kouhei Tsumoto
The University of Tokyo

28P-050 **Heterocomponent protein tube formation via “Nature Inspired Protein Assembly Design (NIPAD)”**

Masahiro Noji, Yukihiko Sugita, Makito Miyazaki, Yuta Suzuki
Research Fellow of Japan Society for the Promotion of Science, Japan/Graduate
School of Human and Environmental Studies, Kyoto University, Kyoto, Japan

28P-051 **Understanding the tussle between aggregation-prone proteins and chaperons; toward the development of an enzyme immobilization platform**

Nilanjana Bose
INDIAN INSTITUTE OF TECHNOLOGY, DELHI

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- 28P-052** **De Novo Design of P-loop Harboring Protein**
Takahiro Kosugi, Nobuyasu Koga
Institute for Molecular Science (IMS), National Institutes of Natural Sciences (NINS)/
Exploratory Research Center on Life and Living Systems (ExCELLS), National
Institutes of Natural Sciences (NINS)/Molecular Science Program, SOKENDAI (The
Graduate University for Advanced Studies)/PRESTO, Japan Science and Technology
Agency
- 28P-053** **De novo design of helical peptide binders targeting the KIX domain of
CBP**
Shunji Suetaka, Munehito Arai
Department of Life Sciences, Graduate School of Arts and Sciences, The University of
Tokyo, Tokyo, Japan
- 28P-054** **Red fluorescent proteins engineered from green fluorescent proteins**
Hiromi Imamura, Shiho Otsubo, Mizuho Nishida, Norihiro Takekawa,
Katsumi Imada
Kyoto University
- 28P-055** **A “Protein Structure Transformer” for integrative structural biology
and molecular design**
Lucien Fabrice Krapp, Fernando Meireles, Luciano Abriata,
Matteo Dal Peraro
Laboratory for Biomolecular Modeling, EPFL
- 28P-056** **Genetically encoded fluorescent biosensors for cellular metabolism**
Yusuke Nasu, Yuki Kamijo, Robert Campbell
Department of Chemistry, School of Science, The University of Tokyo/PRESTO, Japan
Science and Technology Agency
- 28P-057** **Role of “relaxed” peptide bond in protein structure and function**
Kaori Chiba, Masaru Hoshino, Hiromu Ohshima, Manami Suwa
National Institute of Technology, Ibaraki college

Poster Sessions

Protein: Intrinsic disorder

28P-058 **Deciphering the Role of GM1 Ganglioside-Bound A β Species in Alzheimer's Disease: Insights from Monoclonal Antibody 4396C and Advanced Biophysical Techniques**

Maho Yagi-Utsumi, Satoru G. Itoh, Yui Kanaoka, Shogo Miyajima, Katsuhiko Yanagisawa, Katsuyuki Nishimura, Hisashi Okumura, Takayuki Uchihashi, Koichi Kato

Graduate School of Pharmaceutical Sciences, Nagoya City University/Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences

Membrane proteins

28P-060 **Strategies for Cancer Therapy by Regulating Intracellular Dynamics of Antibody Drugs**

Kazuya Kabayama, Yoshiyuki Manabe, Atsushi Toyoshima, Kazuko Kaneda, Tadashi Watabe, Koichi Fukase

Institute for Radiation Sciences, Osaka University/Department of Chemistry, Graduate School of Science, Osaka University/FRC, Graduate School of Science, Osaka University

28P-061 **Differential molecular responses of PIEZO1 to membrane tension and ligand binding observed with diffracted X-ray tracking**

Mei Ishij, Kayoko Kawaguchi, Mayui Sugiura, Hiroshi Sekiguchi, Tatsuya Arai, Kazuhiro Mio, Yuji Sasaki

The Graduate School of Frontier Sciences, The Univ. of Tokyo

28P-062 **Thermodynamic Analysis of pH-Dependent Substrate Binding in the Multidrug Transporter, EmrE**

Kazumi Shimono, Keisuke Matsuda, Shoko Suzuki, Shuichi Miyamoto, Seiji Miyauchi

Sojo University/Toho University

28P-063 **INTRAMOLECULAR DOMAIN DYNAMICS OF LIGHT-HARVESTING PROTEIN LH1-RC OBSERVED BY THE DIFFRACTED X-RAY TRACKING METHOD**

Tatsunari Ohkubo, Tatsuya Arai, Hiroshi Sekiguchi, Kazuhiro Mio, Yuji C. Sasaki

Grad. Sch. Med Life Sci, Yokohama City University/OPERANDO-OIL, AIST

- 28P-064** **NMR and modelling study of interaction of spider Cys-knot toxins with membrane and cationic ion-channels of P-loop superfamily**
Zakhar Shenkarey, Pavel Mironov, Eugene Kovalenko, Dmitrii Kulbatskii, Alexander Paramonov, Mikhail Shulepko, Maxim Zaigraev, Ekaterina Lyukmanova
Department of Biology, MSU-BIT Shenzhen University, Shenzhen, China/Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia
- 28P-066** **Diffusion and Oligomerization of GPCRs in Live Cells – The Impact of Ligands and Membrane Disruptors**
Claudiu Gradinaru
University of Toronto, Canada
- 28P-067** **Usability of the novel detergent NDT-C11 in cryoEM**
Christoph Gerle, Chimari Jiko, Jiannan Li, Chai Gopalasingam, Hideki Shigematsu, Pilseok Chae
Riken SPring-8 Center, Sayo, Japan
- 28P-068** **The functional role of the pleckstrin homology domains of dynamins in evolution and disease**
Isabel Pérez-Jover, Javier Espadas, Irune Ornos, Julene Ormaetxea Guisasola, Isaac Santos-Pérez, Vadim Frolov, Anna Shnyrova
Biophysics Institute (CSIC, UPV/EHU), Leioa, Spain/Department of Biochemistry and Molecular Biology, University of the Basque Country, Leioa, Spain

DNA & DNA binding proteins

- 28P-069** **The conformational analysis of DNA and nucleosome with doxorubicin analyzed by molecular dynamics simulation**
Hisashi Ishida, Hidetoshi Kono
Institute for Quantum Life Science, National Institutes for Quantum Science and Technology
- 28P-070** **DNA-binding and -unwinding Dynamics of the nonhexameric Escherichia coli UvrD helicase lacking C-terminal amino acids**
Hiroaki Yokota
The Graduate School for the Creation of New Photonics Industries

Poster Sessions

28P-071 **Role of Long-range Interactions in Protein-DNA Recognition**

Anastasia A. Anashkina

Laboratory of DNA-protein interactions, Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, 119991 Vavilov str, 32, Moscow, Russia/Department of Information and Internet Technologies, Institute of Biodesign and Modeling of Complex Systems, Sechenov University, 119048, Trubetskaya Ulitsa, 8 b.2, Moscow, Russia

28P-072 **In-cell NMR analysis on base-pair opening dynamics and interactions with ligands of nucleic acids in living human cells**

Yudai Yamaoki, Takashi Nagata, Tomoki Sakamoto, Omar Eladl, Keiko Kondo, Masato Katahira

Institute of Advanced Energy, Kyoto University/Graduate School of Energy Science, Kyoto University

RNA & RNA binding proteins

28P-073 **Theoretical study on an enzymatic reaction of the hammerhead ribozyme**

Ayaka Matsuyama, Masahiko Taguchi, Shigehiko Hayashi
Kyoto University, Kyoto, Japan

DNA/RNA nanotechnology

28P-074 **RNA droplets perform 'AND' logic operation upon an input of targeted microRNAs**

Hirotake Udono, Minzhi Fan, Yoko Saito, Hirohisa Ohno, Shin-ichiro M. Nomura, Yoshihiro Shimizu, Hirohide Saito, Masahiro Takinoue
Tokyo Institute of Technology

28P-075 **Use of aptamers to control nucleic acid phase separation**

Samuel Hauf, Yohei Yokobayashi
Okinawa Institute of Science and Technology

28P-077 **Experimental investigation of a modified Whiplash PCR driven by successive primer extension for massively parallel Implementation of DNA-based state machines**

Ken Komiya, Koji Sakamoto
Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

28P-078 **Construction of giant unilamellar vesicle type molecular robots that uses cargo/component-holding DNA hydrogel**

[Shoji Iwabuchi](#), Ryuji Kawano
Tokyo University of Agriculture and Technology

28P-079 **Dimeric DNA origami nanocapsules for controllable cargo accessibility**

[Yusuke Sakai](#), Joanna Markiewicz, Martyna Adamiak, Dmitry Ghilarov, Piotr Stepień, Jonathan G Heddl
Malopolska Centre of Biotechnology, Jagiellonian University, Poland

Chromatin & Chromosomes

28P-080 **Brownian dynamics with exact solutions of diffusion in 3D for chromatin dynamics**

Yukitaka Ishimoto
Grad. Sch. of Sci. Eng., Saga University

Water & Hydration & Electrolyte

28P-081 **Nonthermal excitation effects of sub-terahertz radiation on transcription by RNA polymerase**

Masahiko Imashimizu
AIST

28P-082 **Role of hydration water on the stability of proteins**

Mafumi Hishida
Tokyo University of Science

28P-083 **Liquid water structure by means of molecular dynamic simulation and machine-learning**

[Taku Mizukami](#), Nguyen Viet Cuong, Dam Hieu Chi
School of Materials Science, Japan Advanced Institute of Science and Technology

Morphogenesis and Development

28P-084 **Epithelial Morphogenesis Analysis Using Texture Tensor**

[Toshinori Namba](#), Kaoru Sugimura, Shuji Ishihara
Universal Biology Institute, The University of Tokyo, Tokyo, Japan/Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan

Poster Sessions

Molecular motor

- 28P-085** **KIF6 is essential for male fertility through the ATP production pathway within sperm flagella**
Tsukasa Makino, Chizuru Ito, Takeshi Masuda, Kazuho Ikeda, Daisuke Takao, Yasushi Okada, Kiyotaka Toshimori, Masahide Kikkawa
University of Tokyo
- 28P-086** **Exploring Efficient Control of F1-ATPase**
Takahide Mishima, Yohei Nakayama, David A. Sivak, Shoichi Toyabe
Department of Applied Physics, Graduate School of Engineering, Tohoku University
- 28P-087** **Product inhibition slow down the moving velocity of processive chitinase and sliding-intermediate state blocks re-binding of product**
Yoshiko Tanaka, Takayuki Uchihashi, Akihiko Nakamura
Shizuoka University/Institute for Molecular Science
- 28P-088** **Decoding Volvox Swimming: Out-of-Phase Metachronal Waves Drive Oscillating Speed and Rotational Steering**
Katsuya Shimabukuro, Natsume Takeda, Tatsuya Suehiro, Naoki Uemura
National Institute of Technology, Ube College
- 28P-090** **The Force-Generating State of Myosin Detected by Quasielastic Neutron Scattering**
Satoru Fujiwara, Shinsaku Maruta, Yasunobu Sugimoto, Kai Nishikubo, Taiki Tominaga, Akio Inoue, Hidetaka Furuya, Katsuzo Wakabayashi, Toshiaki Arata
National Institutes for Quantum Science and Technology
- 28P-091** **Rotation-dependent inhibition and activation mechanism of ATPase inhibitory factor 1 for mitochondrial ATP synthase from atomistic simulation**
Ryohei Kobayashi, Kei-ichi Okazaki
Research Center for Computational Science, Institute for Molecular Science, Aichi, Japan

28P-092 **CryoEM structure of dimeric F1-like ATPase in *Mycoplasma mobile* suggests a rotary catalytic mechanism for the gliding motility**

[Takuma Toyonaga](#), Takayuki Kato, Akihiro Kawamoto, Tomoko Miyata, Keisuke Kawakami, Junso Fujita, Tasuku Hamaguchi, Keiichi Namba, Makoto Miyata

Grad. Sch. Sci., Osaka Metro. Univ., Osaka, Japan/OCARINA, Osaka Metro. Univ., Osaka, Japan/IMRAM, Tohoku Univ., Miyagi, Japan/AIMcS, Tohoku Univ., Miyagi, Japan

28P-093 **Processive movement of myosin II HMM oligomers along actin filaments**

[Taro QP Uyeda](#), Hideya Hayashi

Department of Physics and Applied Physics, Graduate School of Advanced Science and Engineering, Waseda University

Single Molecule Biophysics

28P-094 **CHEMICAL FRICTION ALONG THE MINOR GROOVE OF DNA FACILITATES ENZYMATIC TRANSLOCATION OF λ EXONUCLEASE VIA ELECTROSTATIC RATCHET**

[Gwangrog Lee](#), Jungmin Yoo, HyeokJin Cho, Jejoong Yoo
Korea Advanced Institute of Science and Technology

28P-095 **Single-molecule level tracking of the CCT/TRiC chaperonine mediated functional cycle**

[Kazutaka Araki](#), Takahiro Watanabe-Nakayama, Daisuke Sasaki, Yuji Sasaki, Kazuhiro Mio
OPERANDO-OIL, AIST, Chiba, Japan

28P-097 **Multidisciplinary Platforms to Study Biological Questions**

Hsiufang Fan
Institute of Biomedical Science, National Sun Yat-sen University, Taiwan

28P-098 **deepFLUOR: Deep Learning Classification of Single-Molecule Signals**

[Jinseob Lee](#), Byungju Kim, Yeongkyoung Park, Yoonki Kim, Jongbong Lee
School of Interdisciplinary Bioscience and Bioengineering, POSTECH, Republic of Korea

Poster Sessions

Cell biology: Adhesion

- 28P-099** **Stress propagation in a living cell**
Ayama Tokuyasu
Grad. Sch. Nanobioscience, Yokohama city university, Kanagawa, Japan
- 28P-101** **S100A11 promotes focal adhesion disassembly via myosin II-driven contractility and Piezo1-mediated Ca²⁺ entry**
Tareg Omer Mohammed, You-Rong Lin, Kai Weissenbruch, Kien Xuan Ngo, Yanjun Zhang, Noriyuki Kodera, Martin Bastmeyer, Yusuke Miyanari, Azuma Taoka, [Clemens M. Franz](#)
WPI Nano Life Science Institute, Kanazawa University, Kanazawa, Japan

Cell biology: Motility

- 28P-102** **Wave dynamics and collective behavior of swimming flagellar apparatus isolated from the green algae *C. reinhardtii***
[Azam Gholami](#), Sai Venkata Ramana, Albert Bae
NYU Abu Dhabi, UAE
- 28P-103** **Symbiotic bacteria break through narrow passage by flagellar wrapping**
Aoba Yoshioka, Tetsuo Kan, Kazutaka Takeshita, Hirofumi Wada, Yoshitomo Kikuchi, [Daisuke Nakane](#)
Department of Engineering Science, The University of Electro-Communications
- 28P-104** **The effect of TGF- β -induced EMT on the establishment of epithelial collective migration**
[Tomoaki Nagai](#), Hirokazu Kaji, Michiru Nishita
Department of Biochemistry, Fukushima Medical University School of Medicine
- 28P-106** **Characteristics and mechanics of the crawling of the tested amoeba *Arcella* sp.**
Genta Matsumoto, Katsuhiko Sato, Toshiyuki Nakagaki, [Yukinori Nishigami](#)
Graduate School of Life Science, Hokkaido University, Sapporo, Japan/Research Institute for Electronic Science, Hokkaido University, Sapporo, Japan

- 28P-107** **Shape coupled bifurcation of an amoeba cell brings ballistic movement in amoeboid migration**
Hiroyuki Ebata, Yukinori Nishigami, Hisanori Fujiwara, Satoru Kidoaki, [Masatoshi Ichikawa](#)
Department of Physics, Kyoto University, Japan
- 28P-108** **Ciliary waveform conversion is induced by the shape change of doublet microtubule accompanied by the modification of outer-arm dynein motor activity**
[Toshiki Yagi](#), Ai Sumiyoshi, Shogo Sawada
Prefectural University of Hiroshima
- 28P-109** **Viewing the swimming motion of a unicellular organism in extreme environmental conditions.**
Masayoshi Nishiyama
Kindai University
- 28P-110** **The Calcium Sensitive Helical Arrangement of Axonemal Components in Chlamydomonas Flagella**
[Hitoshi Sakakibara](#), Kenta Ishibashi, Hiroyuki Iwamoto, Hiroaki Kojima, Kazuhiro Oiwa
Bio-ICT Lab. NICT, Hyogo, Japan
- 28P-111** **Utilizing Wavelet Analysis Features for the Simplified Prediction of Enhanced Cellular Stress Fluctuations on the Matrix with Stiffness Heterogeneity**
Satoru Kidoaki
IMCE, Kyushu University
- 28P-112** **Gliding direction of Mycoplasma mobile correlates with the curved configuration of its cell shape**
[Kana Suzuki](#), Daisuke Nakane, Takayuki Nishizaka
Gakushuin University
- 28P-113** **Functional exploration of Candidatus Izimiplasma MreB using the minimal synthetic bacterium JCVI-syn3B.**
[Ryu Takaishi](#), Mone Mimura, Hana Kiyama, Makoto Miyata
Osaka Metropolitan University

Poster Sessions

Cell biology: Cytoskeleton & Membrane skeleton

- 28P-114** **Preparation of Dictyostelium discoideum NAA80 knockout strain**
Tomoko Tsuji, Akira Nagasaki, Taro Uyeda
Department of Physics, Faculty of Advanced Science and Engineering, Waseda University, Tokyo, Japan
- 28P-115** **Visualization of intracellular structure of D. discoideum during unicellular and multicellular phases**
Yuki Gomibuchi, Yukihisa Hayashida, Yusuke V. Morimoto, Takuo Yasunaga
Grad. Sch Comp. Sci and Sys. Eng., Kyushu Inst. Tech., Fukuoka, Japan
- 28P-116** **Direct measurement of the physical properties of ER**
Mao Ikeda
Yokohama City University
- 28P-117** **Visualization of GTP hydrolysis in microtubules**
Tomohiro Shima, Hanjin Liu
Graduate School of Science, The University of Tokyo
- 28P-118** **Void space around microtubules**
Shinji Kamimura, Tomohiro Shima, Yasushi Okada, Hiroyuki Iwamoto
Department of Biological Sciences, Faculty of Science and Engineering, Chuo University, Tokyo, Japan

Cell biology: Signal transduction & Cell membrane

- 28P-120** **Application of Single-Molecule Tracking to Drug Discovery**
Daisuke Watanabe, Michio Hiroshima, Masahiro Ueda
Laboratory of Single Molecule Biology, Graduate School of Frontier Biosciences, Osaka University; Suita, Osaka, Japan/Laboratory for Cell Signaling Dynamics, Center for Biosystems Dynamics Research, RIKEN; Suita, Osaka, Japan
- 28P-121** **Investigation of cellular localization of opioid receptors: A combined biochemical assay and microscopy study**
Ming Chi Chen, Guan Yu Zhuo, Tzu Yu Lin, Shih Ting Lin, Daniel Tzu Li Chen, Cynthia Wei Sheng Lee
Institute of Translational Medicine and New Drug Development, China Medical University, Taichung 40402, Taiwan

- 28P-122** **Quantification of repellent response of single E. coli cell through the change in polar localization of adaptation enzyme CheB and flagellar motor rotation**
Hajime Fukuoka, Yumiko Uchida, Yong-Suk Che, Akihiko Ishijima
Grad. Sch. Frontier Biosci., Osaka Univ.
- 28P-123** **Lamellipodia-like membrane protrusions maintain the integrity of epithelial cell-cell junctions**
Yosuke Senju
Research Institute for Interdisciplinary Science (RIIS), Okayama University
- 28P-124** **Unilateral-bidirectional regulation of electrical synapse formation in C. elegans**
Zan Wu, Lin Pang, Mei Ding
Institute of Genetics and Developmental Biology, Chinese Academy of Sciences

Biological & Artificial membrane: Structure & Property

- 28P-125** **Curcumin Exerts the Membrane Raft Modulating Activity via Phase Separation and Induces CD44 Shedding in Tumor Cells**
Toshiyuki Murai, Yoshikazu Masaki, Kazuma Yasuhara
Osaka University
- 28P-126** **The effect of different lateral packing stress in acyl chains on KcsA orientation and structure in lipid bilayer**
Eri Saki H. Hayakawa, Misuzu Ueki, Elmukhtar Alhatmi, Shigetoshi Oiki, Fuyuki Tokumasu, Masayuki Iwamoto, Drake C. Mitchell
Div. of Medical Zoology, Dept. of Infection and Immunity, Jichi Medical Univ.
- 28P-127** **Probing the supramolecular aggregation state of bacterial endotoxin to reveal the basis of biological recognition and endotoxin masking in drug formulations**
Andra B Schromm, Nicolas Gisch, Wilmar Correa, Walter Richter, Guillermo Martinez-de-Tejada, Klaus Brandenburg, Friedrich von Wintzingerode
Division of Immunobiophysics, Research Center Borstel, Leibniz Lung Center, Borstel, Germany

Poster Sessions

Biological & Artificial membrane: Dynamics

28P-128 **Non-equilibrium patterns in phase-separated lipid membranes under shear flow**

Tsutomu Hamada, Shino Mizuno, Hiroyuki Kitahata
Japan Advanced Institute of Science and Technology

Biological & Artificial membrane: Excitation & Channels

28P-129 **Towards elucidating the tension effects on water flux across lipid bilayers and aquaporins: An attempt using water-in-oil microdroplets**

Misuzu Ueki, Takahisa Maki, Masayuki Iwamoto
Dep. Mol. Neurosci., Facul. Med. Sci., Univ. Fukui

28P-130 **Light-evoked channel activity using photolipids**

Rohit Yadav, Juergen Pfeffermann, Nikolaus Goessweiner-Mohr, Peter Pohl
Johannes Kepler University, Linz, Austria

Membraneless Organella, autophagy, Liquid-liquid phase separation

28P-131 **The role of promyelocytic leukemia protein (PML) in the regulation of calcium homeostasis in HeLa cells**

Alexander Fonin, Rinat Sharipov
Laboratory of Protein Structural Dynamics, Stability and Folding, Institute of Cytology, St. Petersburg, 194064, Russia

28P-132 **Effect of F-actin, myosin and its fragments on the morphology and stability of PEG/DEX droplets**

Tatsuyuki Waizumi, Hiroki Sakuta, Mahito Kikumoto, Masahito Hayashi, Kanta Tsumoto, Kingo Takiguchi, Kenichi Yoshikawa
Grad. Sch. Sci., Nagoya Univ.

28P-133 **Translation-coupled genomic RNA replication in fibril-stabilized all-aqueous droplet colonies**

Ryo Mizuuchi, Hidekazu Sono, Keiji Murayama, Norikazu Ichihashi
Department of Electrical Engineering and Bioscience, Faculty of Science and Engineering, Waseda University, Tokyo, Japan/JST, FOREST, Saitama, Japan

28P-134 **PRESSURE AND TEMPERATURE EFFECTS ON FUS LIQUID DROPLET OF AMYOTROPHIC LATERAL SCLEROSIS PATHOLOGICAL VARIANT, R495X**

Yutaro Shiramasa, Ryu Yamamoto, Fuka Sasaki, Soichiro Kitazawa, Tomoshi Kameda, [Ryo Kitahara](#)

Graduate School of Pharmacy, Ritsumeikan University/College of Pharmaceutical Sciences, Ritsumeikan University

28P-136 **Micropolarity governs the structural organization of biomolecular condensates**

Songtao Ye, Chia-Heng Hsiung, Andrew Latham, Bin Zhang, [Xin Zhang](#)

Department of Chemistry, Westlake University, 600 Dunyu Road, Hangzhou 310030, Zhejiang Province, China

Chemoreception

28P-137 **Structural and biochemical analyses of SatA, a periplasmic binding protein involved in chemotactic response to serine with Mlp3 in *Vibrio cholerae*.**

[Miyuki Aoyama](#), Norihiro Takekawa, So-ichiro Nishiyama, Hirotaka Tajima, Ikuro Kawagishi, Katsumi Imada

Dept. of Macromol. Sci., Grad. Sch. of Sci., Osaka Univ.

Neuroscience & Sensory systems

28P-138 **Post-synaptic Effects of CPTX on Excitatory Synapses**

[Boxiao Zhao](#), Akito Hattori, Shigeo Sakuragi, Hiroko Bannai, Michisuke Yuzaki

School of Advanced Science and Engineering, Waseda University, Tokyo, Japan

28P-139 **Regulation of intracellular tau dynamics using optogenetic tools**

[Shigeo Sakuragi](#), Akito Hattori, Boxiao Zhao, Yoshihiro Sakata, Gen Matsumoto, Akihiko Takashima, Yoshiyuki Soeda, Hideaki Yoshimura, Hiroko Bannai

Waseda University, School of Advanced Science and Engineering

Poster Sessions

Neuronal circuit & Information processing

- 28P-141** **Fast Intrinsic Optical Signal (FIOS) measurements of brain slices: no-stain, label-free and non-invasive fast optical signal measurements**
Yoko Tominaga, Maki Koike-Tani, Tomomi Tani, Takashi Tominaga
Inst. of Neurosci., Tokushima Bunri Univ., Sanuki, Japan
- 28P-142** **Visualizing demyelination effects on interhemispheric communication with voltage-sensitive dye imaging in cuprizone-induced multiple sclerosis model mice**
Kyoka Tsukuda, Michiko Miwa, Makiko Taketoshi, Yoko Tominaga, Kentaro Nakashima, Takashi Tominaga
Grad. Sch. of Pharm. Sci., Tokushima Bunri Univ., Japan/Inst. of Neurosci., Tokushima Bunri Univ., Japan

Behavior

- 28P-143** **The Implications of microRNA, CaMK2A, and MeCP2 Signaling on Adolescent Cognitive Ability**
Ting-Kuang Yeh, Li-Ching Lee, Pei-Jung Lin, Chun-Yen Chang
National Taiwan Normal University

Photobiology: Vision & Photoreception

- 28P-144** **The importance of water in membrane receptor function**
Anthony Watts
Biochemistry Department, University of Oxford, Oxford, OX1 3QU UK
- 28P-145** **Time-resolved detections of substrate release and uptake reactions of the light-driven chloride pump halorhodopsin**
Chihaya Hamada, Keisuke Murabe, Takashi Tsukamoto, Takashi Kikukawa
Grad. Sch. Life Sci., Hokkaido Univ., Sapporo, Japan/Fac. Adv. Life Sci., Hokkaido Univ., Sapporo, Japan
- 28P-146** **Molecular characterization of opsins from a nematode**
Keiichi Kojima, Yuki Tanioka, Keita Sato, Yosuke Nishimura, Susumu Yoshizawa, Hideyo Ohuchi, Takahiro Yamashita, Yuki Sudo
Fac. Med. Dent. Pharm. Sci. Okayama Univ., Okayama, Japan

- 28P-147** **Study on the Mechanisms of High Fluorescence of Archaeorhodopsin-3 (AR3) Mutants**
Masae Konno, Krystyna Herasymenko, Stefan Haacke, Keiichi Inoue
The Institute for Solid State Physics, University of Tokyo, Japan
- 28P-148** **Analysis of the mechanism of photoreceptor RcPYP complex formation**
Yoichi Yamazaki, Yuna Kawabuchi, Kento Yonezawa, Sachiko Toma-Fukai, Hironari Kamikubo
Division of Materials Science, Nara Institute of Science and Technology
- 28P-149** **Driving force of proton pump rhodopsins revealed by electrophysiological study**
Satoshi Tsunoda, Akari Okuyama, Shoko Hososhima, Hideki Kandori
Graduate School of Engineering, Nagoya Institute of Technology, Nagoya, Japan/
OptoBio Technology Research Center, Nagoya Institute of Technology, Nagoya, Japan
- 28P-150** **Solid-state NMR characterization of histidine residues in Themoplasmales archaeon heliorhodopsin**
Sari Kumagai, Toshio Nagashima, Toshio Yamazaki, Kota Katayama, Hideki Kandori, Izuru Kawamura
Yokohama National University
- 28P-151** **Characterization of the magnetic and geometrical structure of radical pairs in Serum Albumin by electron spin resonance**
Hiroki Nagashima, Masaki Kashiwazaki, Shuhei Arai, Kiminori Maeda
Graduate School of Science and Engineering, Saitama University/Institute for Quantum Science and Technology, National institutes for Quantum Science and Technology
- 28P-152** **Novel green/red light-sensing mechanism in the phytochrome-superfamily protein**
Takayuki Nagae, Yuya Fujita, Tatsuya Tsuchida, Takanari Kamo, Ryoka Seto, Masako Hamada, Hiroshi Aoyama, Ayana Sato-Tomita, Tomotsumi Fujisawa, Toshihiko Eki, Yohei Miyanoiri, Yutaka Ito, Takahiro Soeta, Yutaka Ukaji, Masashi Unno, Masaki Mishima, Yuu Hirose
Toyoashi University of Technology

Poster Sessions

Photobiology: Photosynthesis

- 28P-153** **Molecular Docking Simulations at Quinone Binding Site in Photosynthetic Reaction Centers**
Ayumu Takagi, Shigeru Itoh, Akihiro Kimura, Hiroataka Kitoh
Grad. Sch. Sci. Eng., Kindai Univ.
- 28P-154** **Fluorescence spectra of a photosynthetic carbonyl carotenoid, siphonaxanthin: Dual fluorescence observed only at ambient temperature in polar solvents**
Kazuhiro Yoshida, Soichiro Seki, Yumiko Yamano, Tetsuichi Wazawa, Takeharu Nagai, Ritsuko Fujii
Grad. Sch. Sci., Osaka Metropolitan Univ., Osaka, Japan/Grad. Sch. Sci., Osaka City Univ., Osaka, Japan/ReCAP, Osaka Metropolitan Univ., Osaka, Japan
- 28P-155** **Cryo-EM structure of marine green algal LHCII utilizing blue-green light**
Soichiro Seki, Tetsuko Nakaniwa, Pablo Castro-Hartmann, Kasim Sader, Akihiro Kawamoto, Hideaki Tanaka Tanaka, Qian Pu, Genji Kurisu, Ritsuko Fujii
Division of Molecular Materials Science, Graduate School of Science, Osaka City University, 3-3-138, Sugimoto, Sumiyoshi-ku, Osaka 558-8585, Japan
- 28P-156** **Biohydrogen production from whiskey waste liquid by two-stage fermentation**
Masahiro Hibino, Kousei Miyamoto
Div. Sust. Enviro. Eng., Murooran Inst. Tech.
- 28P-157** **Energy gradient of the $\beta 82$ chromophores established by the linker proteins in *Synechocystis* PCC 6803 Phycobilisome Rod**
Hiroto Kikuchi
Dept. of Phys., Nippon Medical School
- 28P-158** **Estimation of Local Antenna Sizes of Photosystem I in *Chlamydomonas* Cells**
Xianjun Zhang, Yuki Fujita, Rin Taniguchi, Shen Ye, Yutaka Shibata
Department of Chemistry, Graduate School of Science, Tohoku University

Photobiology: Optogenetics & Optical control

- 28P-159** **The effect of blue light on the proliferation of E. coli cells**
Nagomi Matsumoto, Osamu Hisatomi
Graduate School of Science, Osaka University, Toyonaka, Osaka, Japan
- 28P-160** **Photocontrol of small GTPase Ras fused with a photoresponsive protein**
Nobuyuki Nishibe, Ziyun Zhang, Kazunori Kondoh, Shinsaku Maruta
Department of Biosciences, Graduate School of Science and Engineering, Soka University Hachioji, Tokyo Japan
- 28P-161** **Electrophysiological characterization of light-activated proton-transporting heliorhodopsins**
Shoko Hososhima, Satoshi Tsunoda, Hideki Kandori
Department of Life Science and Applied Chemistry, Nagoya Institute of Technology, Showa-ku, Nagoya 466-8555, Japan/OptoBioTechnology Research Center, Nagoya Institute of Technology, Showa-ku, Nagoya 466-8555, Japan
- 28P-162** **Reconstitution of a light-activatable transcription factor, Photozipper, with extrinsic chromophores**
Osamu Hisatomi, Nagomi Matsumoto
Graduate School of Science, Osaka University, Toyonaka, Osaka, Japan

Radiobiology & Active oxygen

- 28P-163** **YAP/Aurora A-mediated ciliogenesis regulates ionizing radiation-induced senescence via Hedgehog pathway in tumor cells**
Jinpeng He, Wei Ma, Li Wei, Tongshan Zhang, Junrui Hua, Jufang Wang
Institute of Modern Physics, Chinese Academy of Sciences/University of Chinese Academy of Sciences
- 28P-164** **Cadmium tolerance, accumulation and translocation in sweet sorghum irradiated by carbon beam**
Xicun Dong
Institute of Modern Physics, Chinese Academy of Sciences

Poster Sessions

Origin of life & Evolution

- 28P-165** **Analysis of evolutionary constraints using bacterial experimental evolution**
Astushi Shibai, Sumpei Sato, [Chikara Furusawa](#)
Center for Biosystems Dynamics Research, RIKEN/Universal Biology Institute, The University of Tokyo
- 28P-166** **Mega-phylogenetic evolution of complex adaptive traits in thousands of bacterial species**
[Takao K Suzuki](#), Wataru Iwasaki
Graduate School of Frontier Sciences, the University of Tokyo
- 28P-167** **Quantum evolution form electronic state of macro-biomolecules**
Masanori Yamanaka
Nihon University
- 28P-168** **The Relation Between Biology and Physics: Origins of Life Research and its Philosophical Implications**
Julieta Macome
History and Philosophy of Science Department, Cambridge University

Synthetic biology & Artificial cells

- 28P-169** **Spatially separated transcription and translation in the artificial cell with the artificial organelle**
[Kanji Tomohara](#), Yoshihiro Minagawa, Hiroyuki Noji
Graduate School of Engineering, The University of Tokyo, Tokyo, Japan
- 28P-170** **Synthetic minimal cells with various vesicle-polymer compositions: Toward implementing evolution**
Taro Suzuki
Department of Physics, Graduate School of Science, Tohoku University, Japan.
- 28P-171** **Molecular tools aiming at arbitrary manipulation of micro-structures in living cells**
Hideki Nakamura
Hakubi Center for Advanced Research, Kyoto University, Kyoto, Japan./School of Engineering, Kyoto University, Kyoto, Japan/JST PRESTO, Supra-Assembly of Biomolecule, Tokyo, Japan

28P-172 Phase separation-induced actin bundle elongates filopodia-like tube on giant liposome from inside

Masahito Hayashi, Tomoyuki Kaneko

LaRC, Dept. Frontier Biosci. Hosei Univ., Tokyo, Japan/LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ Tokyo, Japan

28P-173 Pattern diversity emerges from a simple gene network

Xiongfai Fu, Jingwen Zhu, Pan Chu

Key Laboratory for Quantitative Synthetic Biology, Shenzhen Institute of Synthetic Biology, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen 518055, China/University of Chinese Academy of Sciences, Beijing 100049, China

Genome biology

28P-174 Insights into chromatin organization obtained by a rapid classification of A/B compartments from Hi-C data

Takashi Sumikama, Hisashi Miura, Ichiro Hiratani, Takeshi Fukuma
PERSTO, JST/Kanazawa University

Computational biology: Bioinformatics

28P-175 Computational Evaluation of the Human Health Effects of the Main Compounds Found in *Artemisia dracunculus*

Andrijana Pujicic, Adriana Isvoran

Department of Biology-Chemistry, West University of Timisoara, 16 Pestalozzi, 300115 Timisoara

28P-178 Development of Prediction Methods for Class A GPCR and G-protein Coupling Selectivity Using Deep Learning

Kento Fujishima, Kenji Etchuya, Ikuo Masuho, Makiko Suwa

Biol. Sci., Grad. Sci. Eng., Aoyama Gakuin Univ., Kanagawa, Japan.

28P-179 Consortium of “Consistent substitutions” on Influenza A(H1N1) viral proteome and its possible consequences on human host-viral interactions: A study using Multiple Sequence Alignments, text mining, and Molecular Dynamics Simulations

Debashree Bandyopadhyay, Syeda Lubna

Birla Institute of Technology and Science, Pilani, Hyderabad Campus

Poster Sessions

- 28P-180** **Analysis of Partial Structural Similarity of ribonuclease and chymotrypsin based on their amino acid sequences**
Takeshi Kikuchi, Ahasanul Kabir, Takuya Takahashi
Ritsumeikan University

Computational biology: Molecular simulation

- 28P-181** **Gas-phase Structural Analysis of Biomolecules using Coarse-grained Molecular Dynamics Simulation**
Kazumi Saikusa, Satoko Akashi, Sotaro Fuchigami
School of Pharmaceutical Sciences, University of Shizuoka
- 28P-183** **2D-replica exchange simulation of membrane permeation process of cyclic hexapeptides**
Tsutomu Yamane, Masateru Ota, Mitsunori Ikeguchi
Riken Center for Computational Science
- 28P-184** **Classification of conformational dynamics of high mannose- type oligosaccharides by molecular simulation and data clustering**
Yue Zhang, Takumi Yamaguchi
School of Materials Science, Japan Advanced Institute of Science and Technology
- 28P-185** **The role of water and cholesterols in APP cleavage by gamma-secretase**
Jinyoung Byun, Juyong Lee
College of Pharmacy, Seoul National University, Seoul, Republic of Korea
- 28P-186** **Decoupling processes of the Adenosine A2A receptor from G-proteins through the lens of dPaCS-MD simulations**
Duy Phuoc Tran, Louis-Philippe Picard, Alexander Oraziotti, Sari Hagimoto, Adnan Sijoka, R. Scott Prosser, Akio Kitao
School of Life Science and Technology, Tokyo Institute of Technology, Tokyo 152-8550, Japan
- 28P-187** **PROTAC-mediated ternary complex structure distribution profiles using enhanced sampling methods**
Genki Kudo, Takumi Hirao, Takatsugu Hirokawa, Ryunosuke Yoshino
Physics Department, Graduate School of Pure and Applied Sciences, University of Tsukuba

- 28P-188** **3D Structure Prediction of the Odorant-bound Olfactory Receptor**
Takumi Hirao, Yusuke Ihara, Chiori Ijichi, Genki Kudo, Ryunosuke Yoshino, Takatsugu Hirokawa
Doctoral Program in Medical Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba
- 28P-189** **Quantitative Evaluation of Protein-Compound Substructure Interaction with Inverse Mixed-Solvent Molecular Dynamics Simulation**
Keisuke Yanagisawa, Ryunosuke Yoshino, Genki Kudo, Takatsugu Hirokawa
Department of Computer Science, School of Computing, Tokyo Institute of Technology/Middle Molecule IT-based Drug Discovery Laboratory (MIDL), Tokyo Institute of Technology
- 28P-190** **Binding Free Energy Shifts of Protein Complexes due to Amino Acid Mutations**
Kazutomo Kawaguchi, Hidemi Nagao
Institute of Science and Engineering, Kanazawa University
- 28P-191** **Computational estimation of the free energy change of peptide- bond rotation induced by reduction of “plant-type” ferredoxin**
Tomoki Nakayoshi, Yusuke Ohnishi, Hideaki Tanaka, Genji Kurisu, Yu Takano
Graduate School of Information Sciences, Hiroshima City University/Faculty of Pharmacy, Meijo University
- 28P-192** **Dependence of the abnormal open states patterns in the ATXN2 gen on the number of CAG repeats**
Stepan Dzhimak, Mikhail Drobotenko, Oksana Lyasota, Jose Luis Hernandez-Caceres, Yuriy Nechipurenko, Alexandr Svidlov, Anna Dorohova
Laboratory of Problems of Stable Isotope Spreading in Living Systems, Southern Scientific Center of the Russian Academy of Sciences, Rostov-on-Don, Russia/ Department of Radiophysics and Nanotechnology, Kuban State University, Krasnodar, Russia,
- 28P-193** **GPU-accelerated coarse-grained MD simulator and its application to postsynaptic density**
Yutaka Murata, Shoji Takada
Dept. Biophysics, Div. Biology, Grad. Sch. of Science, Kyoto University

Poster Sessions

- 28P-195** **Vibrational Dynamics of Water Molecules in FUS Protein Condensates: Molecular Interpretation**
Yotaro Takeda, Tatsuya Ishiyama, Eiji Yamamoto
Department of System Design Engineering, Keio University, Japan
- 28P-196** **Collagen-collagen interactions: Triple helix to helix-helix to fibrils.**
George Anthony Pantelopulos, Robert Best
National Institutes of Health
- 28P-197** **Analysis of Antigen-Antibody Interface Based on MD Simulations: Toward Antibody Design**
Takefumi Yamashita
Hoshi University/The University of Tokyo
- 28P-198** **Simulation-based prediction and elucidation of the pathogenic mechanism of deafness in GJB2-encoded Cx26 channel protein**
Cheng-Yu Tsai, Ying-Chang Lu, Yen-Hui Chan, Chuan-Jen Hsu, Pei-Lung Chen, Chen-Chi Wu, Lee-Wei Yang
Graduate Institute of Medical Genomics and Proteomics, National Taiwan University College of Medicine, Taipei, Taiwan/Department of Otolaryngology, National Taiwan University Hospital, Taipei, Taiwan
- 28P-199** **Applications of Tree-Search-MD to drug target proteins: conformational changes between inactive and active structures of a kinase and a ligand binding to a GPCR**
Yukina Nakai, Toru Ekimoto, Tsutomu Yamane, Masao Inoue, Naoki Ogawa, Sun-Yong Park, Kei Terayama, Mitsunori Ikeguchi
Yokohama City University
- 28P-200** **Theoretical Insights into Drug Resistance Mechanisms of HIV-1 Protease: Residue Interaction Network Analysis**
Keidai Yamase
Chiba Institute of Technology
- 28P-201** **Molecular dynamics simulations of lipid adsorption by PLA2 of snake venom.**
Tatsuhiro Kawashima, Ryuta Imayoshi, Kazutomo Kawaguchi, Hidemi Nagao
Graduate School of Natural Science and Technology, Kanazawa University, Japan

- 28P-202** **Analysis of Protein Simulations Using Relaxation Mode Analysis**
Ayori Mitsutake
Meiji University
- 28P-203** **How the Membranes Fuse: From Spontaneous to Induced**
Hongxia Guo
Institute of Chemistry, Chinese Academy of Sciences
- 28P-204** **Impact of glycosylation on the structural features and hydration effects of glycoproteins**
[Haeri Im](#), Song-Ho Chong, Isseki Yu, Yuji Sugita
RIKEN Cluster for Pioneering Research, Wako, Japan
- 28P-205** **Developing an IDP-Specific Force Field by Optimizing CMAP Parameters**
[Haozhe Guo](#), Chen Song
Peking-Tsinghua Center for Life Sciences, Academy for Advanced Interdisciplinary Studies, Peking University, Beijing, China/Center for Quantitative Biology, Academy for Advanced Interdisciplinary Studies, Peking University, Beijing, China
- 28P-206** **Coarse-Grained Co-transcriptional Folding Simulation of RNA Switch**
Akito Taneda
Hirosaki University

Computational biology: Biological modeling and simulation

- 28P-207** **Dynamic transitions in microtubules: role of flared ends and lattice repair in catastrophes and rescues**
Nikita Gudimchuk, [Veronika Aleksandrova](#), Mikhail Anisimov
Lomonosov Moscow State University, Moscow, Russia
- 28P-208** **Analysis of fracture patterns in a vertex model including detachment of cells**
[Nozomi Fujita](#), Yuichi Togashi
Ritsumeikan University
- 28P-210** **Learning force field parameters from ensemble-averaged data with a differentiable approach**
[Yohei Sako](#), Yasuhiro Matsunaga
Graduate School of Science and Engineering, Saitama University, Saitama, Japan.

Poster Sessions

- 28P-211** **Controlled Drug Delivery from Polymeric Surfaces: Harnessing Sonochemical Methods for Fluorouracil Nanoparticle Synthesis**
Paulina Chytrosz-Wrobel, Monika Golda-Cepa, Piotr Kubisiak,
[Waldemar Kulig](#), Lukasz Cwiklik, Andrzej Kotarba
Department of Physics, University of Helsinki, Helsinki, Finland
- 28P-212** **Molecular modelling, homo-oligomerisation and membrane interactions of hepatitis E virus pORF1 replication polyprotein**
[Thibault Tubiana](#), Sonia Fieulaine, Stéphane Bressanelli
Université Paris-Saclay, CEA, CNRS, Institute for Integrative Biology of the Cell (I2BC),
91198, Gif-sur-Yvette, France
- 28P-213** **Improving Structure-Based Virtual Screening using AlphaFold2 with Multi-State Modeling**
[Woong-Hee Shin](#), Jinung Song, Junsu Ha, Juyong Lee, Junsu Ko
Department of Biomedical Informatics, Korea University College of Medicine
- 28P-214** **Flexible Fitting of Coarse-Grained Models to AFM Images of Intrinsically Disordered Proteins**
[Sakura Homma](#), Yasuhiro Matsunaga
Saitama University
- 28P-215** **Structure formations induced by a non-reciprocal cell-cell interactions in a multicellular system.**
[Biplab Bhattacharjee](#), Masayuki Hayakawa, Tatsuo Shibata
Laboratory for Physical Biology, RIKEN Center for Biosystems Dynamics Research,
Kobe, Japan.
- 28P-216** **Universal existence of power-law correlations in homogeneous states of anisotropic active matter models**
[Hiroyoshi Nakano](#), Kyosuke Adachi
Institute for Solid State Physics, University of Tokyo
- 28P-217** **Searching for the BET interactome through AI and Molecular dynamics simulations**
Alberto Perez
University of Florida/Riken visiting JSPS fellow
- 28P-219** **Membrane fusion as a pathway to fission**
[Russell k w Spencer](#), Marcus Müller
Georg-August Universität Goettingen

Computational biology: machine learning for molecules or cell systems

28P-220 Optimization of In Vitro Glycolytic Pathway Using Machine Learning

[Naosato Takagi](#), Daisuke Kiga

Waseda University, Tokyo, Japan

28P-221 Development of the super-resolution Cryo-EM based on the Generative Adversarial Networks

[Xinyuan Li](#), Takayuki Kato

Graduate School of Frontier Biosciences (FBS), Osaka University

28P-222 Deep Learning-Based Water Molecule Displacement Prediction Method for Improving the Accuracy of Drug Discovery Docking Software

[Yuki Ito](#), Masateru Ohta, Mitsunori Ikeguchi, Takashi Yoshidome

Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan

28P-223 Construction of a physical reservoir computing device using active matter made from a swarm of biomolecular motors

[Yiming Gong](#), Gikyo Usuki, Arif Md. Rashedul Kabir, Kazuki Sada,

Ibuki Kawamata, Nathanael Aubert-Kato, Masatoshi Ichikawa, Akira Kakugo

Graduate School of Science, Kyoto University, Kyoto, Japan

Mathematical & Theoretical biology

28P-224 Spatial point processes with molecular density-dependent association-dissociation and cluster formation in signal transduction on the plasma membrane

Hiroaki Takagi

Nara Medical University, Nara, Japan

28P-226 Professor

Chanho Park, Junil Kim, [Julian Lee](#)

Department of Bioinformatics and Life Science, Soongsil University

Poster Sessions

Data Sharing and Open Science

- 28P-227** **Crafting an Individual-Centric Genomics Platform**
Senkei Umehara, Atsushi Iida, Ken Yagi
GENEX, Inc. (Tokyo, Japan)
- 28P-228** **Serious accumulation of sequence errors in international public database searched by analyzing deposited plasmids in RIKEN-BRC Gene bank with high-throughput sequencing**
Yoshihiro Miwa, Tetsushi Iida, Junko Kijima, Shingo Nozaki, Shotaro Kishikawa
Gene-Eng-Div, BRC, RIKEN

Ecology & Environment

- 28P-229** **Ionic-strength and pH dependent reactivities of ascorbic acid and cysteine toward ozone in microdroplets studied by aerosol optical tweezers**
Yuan-Pin Chang
Department of Chemistry, National Sun Yat-sen University, Kaohsiung, Taiwan.

Nonequilibrium state & Biological rhythm

- 28P-230** **From cellular chirality to large-scale chirality: Emergence of chiral spiral in migrating cellular system**
Masayuki Hayakawa, Biplab Bhattacharjee, Lihao Guo, Hidekazu Kuwayama, Tatsuo Shibata
Laboratory for Physical Biology, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan
- 28P-231** **Integrated Analysis of Circadian Clock in cyanobacteria**
Masaaki Sugiyama, Ken Morishima, Yasuhiro Yunoki, Rintaro Inoue
Institute for Integrated Radiation and Nuclear Science, Kyoto University
- 28P-232** **Computational Study of Peak Position in One Dimensional Mesoscopic Reaction Diffusion System**
Ryuta Imayoshi, Kazutomo Kawaguchi, Hidemi Nagao
Graduate School of Natural Science and Technology, Kanazawa University

- 28P-233** **Density-dependent state transitions and periodic advective flow in an active actomyosin system**
[Tomoka Kashiwabara](#), Yusuke T. Maeda
Dept. of Phys. Kyushu Univ., Fukuoka, Japan

Measurements

- 28P-234** **Extracellular Potential Measurement of Cardiomyocytes in Hyperkalemic Conditions**
Kentaro Kito, Masahito Hayashi, [Tomoyuki Kaneko](#)
LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ., Tokyo, Japan
- 28P-235** **Single Molecule Analysis of Perforin Dynamics Using Nanopore Measurements.**
[Sotaro Nakamura](#), Kazuhiro Kobayashi, Ryo Iizuka, Hideaki Kato, Sotaro Uemura
The University of Tokyo
- 28P-236** **IR super-resolution micro-spectroscopy of keratin proteins in human nails**
[Ayaka Nagaoka](#), Hirona Takahashi, Tetsuya Ida, Makoto Sakai
Okayama University of Science
- 28P-237** **Measurement of photocatalytic hydrogen production in titanium/manganese oxide film/hydrogenated amorphous silicon thin film stack using flavan molecules**
[Yutaka Tsujiuchi](#), Kohei Saito, Kazunori Takada, Koyu Akiyama, Hiroshi Masumoto
Akita UNIV/Tohoku UNIV
- 28P-238** **Current control using external blue-green light in an amino acid-containing gel stacked device in contact with a hydrogenated amorphous silicon thin film**
[Kohei Saito](#), Yutaka Tsujiuchi, Hiroshi Masumoto
Akita UNIV

Poster Sessions

Bioimaging

- 28P-240** **Coupling between vinculin and retrograde actin flow visualized by live-cell single-molecule imaging**
Ying Liu, Naoki Watanabe, Sawako Yamashiro
Laboratory of Single-Molecule Cell Biology, Kyoto University Graduate School of Biostudies, Kyoto, Japan
- 28P-241** **Data-Driven Approaches in Single-Molecule Trajectory Analysis of Protein Mobility in Live Cells**
Yuma Ito, Makio Tokunaga
School of Life Science and Technology, Tokyo Institute of Technology
- 28P-242** **Monitoring the biofilm development of Escherichia coli BL21**
Alexander Karl Bullen, Tomohiro Shima
University of Tokyo
- 28P-243** **Label-free direct screening of “spectral biomarkers” of colorectal tumour-specific P. anaerobius via Raman mapping in combination with data mining**
Pooja Manik Badgujar, Yu-Chung Yu-Chung Lin, Zhe-Rui Zhe-Rui Lin, Kuan-Ting Wu, Chia-Liang Cheng
Department of Physics, National Dong Hwa University, Hualien 97401, Taiwan
- 28P-244** **Revisiting the 105 gap issue in cellular thermal biology by label-free mid-infrared photothermal microscopy**
Keiichiro Toda, Masaharu Takarada, Genki Ishigane, Hiroyuki Shimada, Venkata Ramaiah Badarla, Kohki Okabe, Takuro Ideguchi
The Univ. of Tokyo (Science), Tokyo, Japan
- 28P-245** **Visualization of exocytosis using video-rate bioluminescence imaging**
Satoru Yokawa, Shinji Fukuda, Takahiro Suzuki, Tadahide Furuno
Department of Analytical Chemistry and Biophysics, School of Pharmacy, Aichi Gakuin University
- 28P-246** **Topography considerations for high-speed atomic force microscopy based force mapping on bacteria**
Christian Ganser, Shigetaka Nishiguchi, Takayuki Uchihashi
National Institutes of Natural Sciences, ExCELLS

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- 28P-247** **Optical Freshness Evaluation Method of Raw Fish Meat**
Yasuhiro Maeda, Go Shioi, Tomonobu Watanabe
Laboratory for Comprehensive Bioimaging, RIKEN, BDR, Japan
- 28P-248** **Nanopipette-based single-cell stimulation with non-thermal atmospheric pressure plasma**
Han Gia Nguyen, Linhao Sun, Shinya Kumagai, Shinji Watanabe
Grad. Sch. Nano Life Sci., Kanazawa University, Japan
- 28P-249** **The role of receptor oligomerization in signal transduction investigated through single-molecule analysis**
Hideaki Yoshimura, Takeaki Ozawa
Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan
- 28P-250** **Real-Time Imaging of Granzyme Secretion During CTL Assault on Cancer Cells**
Zhuohao Yang, Yuto Kurisu, Koji Nagaoka, Kazuhiro Kakimi, Takashi Funatsu, Yoshitaka Shirasaki
RCAST, Univ. Tokyo
- 28P-251** **Advancing Severe Asthma Research through Live-Cell Imaging of Secretion Activity**
Yoshitaka Shirasaki, Mai Yamagishi, Kaede Miyata, Yumiko Tanaka, Hiroki Kabata, Misato Irie, Rie Baba, Takashi Kamatani, Kazuyo Moro, Koichi Fukunaga, Sotaro Uemura
Research Center for Advanced Science and Technology, The University of Tokyo
- 28P-252** **Imaging of mitochondrial ATP in mouse sperm before and after capacitation using AMPK activators and inhibitors**
Takashi W Ijiri, Yuika Asanuma, Masamichi Yamamoto
Setsunan University
- 28P-253** **Numerous-color simultaneous imaging with dozens of bioluminescence colors**
Mitsuru Hattori, Yuki Hiruta, Takeharu Nagai
SANKEN, Osaka University, Japan

Poster Sessions

Bioengineering

- 28P-255** **Spiral Formation of Microtubules Driven by Kinesin Motors**
Douglas Ng'ang'a, Takahiro Nitta
Applied Physics Course, Faculty of Engineering, Gifu University
- 28P-256** **Sensitive detection of Salmonella with CRISPR–Cas13a system**
Svitlana Kovalchuk, Yoshihiro Minagawa, Hiroyuki Noji
The University of Tokyo, Tokyo, Japan/National University of Food Technologies, Kyiv, Ukraine
- 28P-257** **Spectroscopic signature responsible for the life activity of regenerating worm *A. viride* studied using Raman spectroscopy and Two-Photon Fluorescence Lifetime Imaging**
Chia-Liang Cheng, Pooja Badgujar, Pei-Yang Huang, Artashes Karmenyan, Viktor Nikolayev, Jiun-Hong Chen
Department of Physics, National Dong Hwa University, Hualien 97401, Taiwan
- 28P-258** **Anticancer peptides delivery systems effects on model and natural lipid membranes**
Bogdan Zorila, Diana Lavinia Stan, Roberta (Stoica) Moisa, Mihaela Bacalum
Department of Life and Environmental Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering
- 28P-259** **Spatiotemporal changes in single cell rheology of developing embryos unveiled by atomic force microscopy**
Takahiro Kotani, Yuki Miyata, Yosuke Tsuboyama, Yuki Fujii, Takaharu Okajima
Graduate School of Information Science and Technology, Hokkaido University

Crystal growth & Crystallization technique

- 28P-260** **Assembly of Cage-Shaped Protein Dps Using Functional Peptides**
Mitsuhiro Okuda, Gabriela Pretre
Meiji University/CIC-nanoGUNE/Komie Corp.

Virus structure, function, SARS-CoV-2

- 28P-261** **Rational in silico design and structure analysis of SARS-CoV-2 neutralizing antibody UT28K**
Shunsuke Kita, Tatsuhiko Ozawa, Kouki Ikeda, Luan Chen, Yuki Anraku, Hideo Fukuhara, Emiko Igarashi, Yumiko Saga, Noriko Inasaki, Jiei Sasaki, Yuhei Kirita, Takao Hashiguchi, Hideki Tani, Hiroyuki Kishi, Hideki Niimi, Katsumi Maenaka
Facul. Pharm. Sci., Hokkaido Univ., Japan
- 28P-262** **Verification of the effect of ligand and receptor flexibility on inhibitory activity by MD simulation**
Suzuka Saito, Masashi Muramoto, Simon Hikiri, Junichi Higo, Takuya Takahashi
Graduate School of Life Sciences, Ritsumeikan University, Kusatsu, Japan.
- 28P-263** **N-substituted anthranilic acid derivatives as PPI inhibitors between Syntenin-1 PDZ domain and SARS-CoV-2 Env protein**
Hidekazu Hiroaki, Ryusei Hamajima, Youichi Suzuki, Eiji Morita, Hong Wu, Yoshihiko Fujioka, Takeshi Tenno
Graduate School of Pharmaceutical Sciences, Nagoya University/Center for One Medicine Innovative Translational Research, Tokai National Higher Education and Research System/BeCellBar LLC, Nagoya, Aichi, Japan
- 28P-264** **Molecular mechanisms of SARS-CoV-2 resistance to nirmatrelvir and the countermeasures**
Haitao Yang
Shanghai Institute for Advanced Immunochemical Studies, ShanghaiTech University, Shanghai, China

Mechanosensing and Mechanobiology, Biological Temperature

- 28P-265** **Analysis on the Role of the Periplasmic Loop of the Bacterial Mechanosensitive Channel MscL**
Yasuyuki Sawada, Takeshi Nomura, Masahiro Sokabe
Institute of Materials Innovation, Institutes of Innovation for Future Society, Nagoya University

Poster Sessions

- 28P-266** **Activation of chloride ion channel CLIC1 by mechanical external force using AFM in breast cancer cell**
Ayana Yamagishi, Samrat Mukherjee, Chikashi Nakamura
National Institute of Advanced Industrial Science and Technology (AIST)/Tokyo University of Agriculture and Technology
- 28P-267** **Mechanical properties of nestin tail domain analyzed by tensile test using AFM**
Ayana Yamagishi, Rina Tokuoka, Daijiro Takeshita, Chiaki Yoshikawa, Tomohiko Yamazaki, Taro Uyeda, Chikashi Nakamura
AIST/Tokyo University of Agriculture and Technology
- 28P-268** **Elucidation of the mechanism of intracellular temperature variation by high-speed temperature mapping**
Masaharu Takarada, Takashi Funatsu, Kohki Okabe
Graduate School of Pharmaceutical Sciences, The University of Tokyo

Biophysics of disease

- 28P-269** **Changes in the properties of rbc's in the process of extracorporeal membrane oxygenation by scanning flow cytometry**
Ekaterina Yastrebova, Valeri Maltsev, Gleb Moroz
V.V. Voevodsky Institute of Chemical Kinetics and Combustion of the Siberian Branch of the RAS
- 28P-270** **Morphology of Cancer Organoids Reproduced by 3D Phase-Field Model**
Kotaro Kawamura, Toshikaze Chiba, Keita Yanagiya, Yutaka Oya, Toshihiro Kawakatsu, Tatsuaki Tsuruyama, Masayuki Imai
Department of Physics, Tohoku University, Aoba, Sendai, Japan

Miscellaneous topics

- 28P-271** **Investigation of boson peak like behaviors appeared in cysteine and related amino acids**
Hirofumi Nema, Yasuhiro Fujii, Akitoshi Koreeda
Ritsumeikan University

Friday, June 28

28P-272

Interactions of Model Antimicrobial Peptides with Lipid Membranes

Normand Voyer, Pierre-Alexandre Paquet-Côté, François Otis,

Jochen Bürck, Patrick Lagüe, Anne S. Ulrich

¹Département de chimie and PROTEO, Université Laval, Québec, Canada