

# Contents Table

---

Welcome Message	2
Outline	3
IUPAB2024 Committee Members	4
<b>Meeting Information</b>	<b>5</b>
Program at a Glance	6
Hands-on Training Program	16
Venue Access	18
Floor Plan	20
Poster Layout	22
Exhibition Layout	24
For Participants	25
For Presenters	32
<b>Oral Sessions</b>	<b>35</b>
Monday, June 24	36
Tuesday, June 25	43
Wednesday, June 26	57
Thursday, June 27	66
Friday, June 28	78
<b>Poster Sessions</b>	<b>87</b>
Tuesday, June 25	88
Wednesday, June 26	142
Thursday, June 27	191
Friday, June 28	241
<b>Sponsored Seminar</b>	<b>289</b>
Tuesday, June 25	290
Wednesday, June 26	293
Thursday, June 27	295
Friday, June 28	298
<b>Chairs and Speakers Index</b>	<b>299</b>
Awards	359
Sponsor Acknowledgements	361
<b>Abstracts</b>	<b>365</b>

# Welcome Message

---

On behalf of the Executive Committee, we are delighted to welcome you to the IUPAB2024 congress in Kyoto, Japan. This prestigious event, a collaboration between the 21st IUPAB (International Union of Pure and Applied Biophysics) and the 62nd BSJ (Biophysics Society of Japan), will take place from June 24 to 28, 2024, at the Kyoto International Conference Center.

With the theme 'Rocking Out Biophysics', this congress aims to invigorate the field of biophysics by fostering collaboration and innovation. Academic activities play a vital role in updating existing concepts, and we believe that biophysics, with its powerful perspectives and techniques, has the potential to reshape our understanding of life sciences boldly.

Our mission is to create a dynamic environment where researchers from diverse disciplines worldwide can convene, share new perspectives, and push the boundaries of biophysics. Distinguished researchers in biophysics and related fields are invited to deliver plenary and keynote talks, while over 30 sessions will feature presentations by leading scientists. Young researchers will have the opportunity to showcase their cutting-edge work through oral and poster presentations.

To encourage open exchange and collaboration across generations and borders, we have planned a variety of events, including Welcome reception, Kyoto Night, and Conference dinner where you will find excellent cuisine, sake, crafts, and music from Kyoto and other places in Japan.

Join us in 'Rocking Out Biophysics'!

Sincerely yours,

**Hiroyuki NOJI**

The chair of the organizing committee of IUPAB2024  
President of Biophysical Society of Japan (2021-2023)  
Professor, The University of Tokyo

# Outline

---

---

**Meeting Title:** 21st IUPAB Congress 2024 (IUPAB2024)

**In Collaboration With:** The 62nd Annual Meeting of the Biophysical Society of Japan

**Venue:** Kyoto International Conference Center

[https://www.icckyoito.or.jp/en/visitor-2/access/getting\\_here/](https://www.icckyoito.or.jp/en/visitor-2/access/getting_here/)

**Date:** June 24 (Mon) – 28 (Fri), 2024

**Theme:** Rocking out Biophysics

**Official Language:** English

**Hosted By:** IUPAB: International Union for Pure and Applied Biophysics

BSJ: The Biophysical Society of Japan

SCJ: Science Council of Japan

**IUPAB2024 Secretariat Office:**

c/o Convention Linkage, Inc.

Sanbancho KS BLDG., 2 Sanbancho, Chiyoda-ku,

Tokyo 102-0075, Japan

TEL: +81-3-3263-8698 FAX: +81-3-3263-8693

E-mail: [IUPAB2024-kyoto@c-linkage.co.jp](mailto:IUPAB2024-kyoto@c-linkage.co.jp)

# IUPAB2024 Committee Members

---

## Executive Organizing Committee

**Chair** Hiroyuki Noji  
**Vice Chair** Kei Yura  
**Secretary General** Kazuhito Tabata

## Finance Committee

**Chair** Katsumi Imada  
**Members** Kazuhito Tabata  
Takeharu Nagai

## Scientific Program Committee

**Chair** Takayuki Nishizaka  
**Members** Hiroko Bannai  
Kumiko Hayashi  
Nobuyasu Koga  
Satoshi Takahashi  
Shuichi Onami  
Tomoko Nishiyama  
Yuji Sugita

## Sponsorship Committee

**Chair** Hiromi Imamura  
**Members** Katsumi Imada  
Takeharu Nagai

## Public Relations Committee

**Chair** Hideki Nakamura  
**Member** Marie Mita

## Poster Committee

**Chair** Tomoyasu Aizawa  
**Members** Eri Chatani  
Daisuke Nakane  
Kayo Hibino  
Keiichi Kojima

## OMOTENASHI Committee

**Chair** Tomomi Tani  
**Members** Chie Hosokawa  
Kazuhito Tabata  
Shunsuke F. Shimobayashi  
Takeharu Nagai

## Public Lecture Committee

**Chair** Shoji Takada  
**Member** Tsuyoshi Terakawa

## Eve Fest Committee

**Member** Kota Katayama

## Observer

**Members** Haruki Nakamura  
Kaori Kakiuchi

# Meeting Information

---

# Program at a Glance

	Room A	Room B-1	Room B-2	Room C-2
8:00				
9:00				
10:00				
11:00				
12:00				
13:00	12:30-13:10 <b>Opening Ceremony</b>			
14:00	13:30-14:20 <b>IUPAB Katchalsky Lecture</b> Prof. Feng Zhang			
15:00	14:30-16:50 <b>Symposium 1</b> Super-resolution and Advanced Microscopy Imaging	14:30-16:50 <b>Symposium 2</b> Morphogenesis during Development and Repair	14:30-16:50 <b>Symposium 3</b> Cryo Electron Microscopy and Tomography	14:30-16:50 <b>Hands-on Training Session D</b> DNA Nanomachine Tutorial
16:00				
17:00	17:00-17:40 <b>Avanti-IUPAB Prize Lecture</b> Prof. Massimo Olivucci			
18:00				
19:00		10:30-12:15 <b>IUPAB Council Meeting</b> (Venue: Room 555) *Invited only		
20:00		19:00-21:00 <b>Presidential Dinner</b> (Venue: Heihachi Jaya) *Invited only		
21:00				

# Monday, June 24

Meeting Information

Room D	Room E	Annex Hall		
				8:00
				9:00
				10:00
				11:00
				12:00
				13:00
				14:00
				15:00
				16:00
				17:00
				18:00
				19:00
				20:00
				21:00

Room D	Room E	Annex Hall		
				8:00
				9:00
				10:00
				11:00
				12:00
				13:00
				14:00
				15:00
				16:00
				17:00
				18:00
				19:00
				20:00
				21:00

14:30-16:50  
**Symposium 4**  
Correlative Cell Imaging

14:30-16:50  
**Symposium 5**  
Theoretical Biology of  
Complex Systems

12:00-17:00  
**Poster display  
and Exhibition**

15:00-17:00  
**Coffee break**

17:50-19:15  
**Welcome Reception**

# Program at a Glance

	Room A	Room B-1	Room B-2	Room C-2
8:00	8:00-8:50 <b>Morning Seminar 1</b> (Avanti Polar Lipids)			
9:00		9:00-9:50 <b>Keynote 1</b> Prof. Kunihiko Kaneko		
10:00	10:00-12:20 <b>The 20th Early Career Award in Biophysics Candidate Presentations</b>	10:00-12:20 <b>Symposium 6</b> Mechanosensing and Mechanobiology, Biological Temperature	10:00-12:20 <b>Symposium 7</b> Protein Structure to Function 1	10:00-12:20 <b>Symposium 8</b> Unstructured/Disordered Proteins, RNA
11:00				
12:00				
	12:20-13:50 <b>Break</b>			
13:00	12:35-13:35 <b>BP Seminar 1</b> (JEOL Ltd.)	12:35-13:35 <b>BP Seminar 2</b> (Carl Zeiss Co., Ltd.)	12:35-13:35 <b>BP Seminar 3</b> (Leica Microsystems K.K.)	12:35-13:35 <b>BP Seminar 4</b>
14:00				(Nakatani Foundation for Advancement of Measuring Technologies in Biomedical Engineering)
15:00				
16:00	16:00-18:20 <b>Symposium 11</b> Single Molecule Biophysics in Chromosome Science	16:00-18:20 <b>Symposium 12</b> Cell Motility, Cytoskeletons and Motor Proteins	16:00-18:20 <b>Symposium 13</b> Protein Structure to Function 2	16:00-18:20 <b>Hands-on Training Session A</b> Millions of Single Live Cell Analysis with the Automated Trans-scale-scope, AMATERAS
17:00				
18:00				
19:00				
20:00				
21:00				



# Tuesday, June 25

Meeting Information

Room D	Room E	Annex Hall	Sakura	
				8:00
				9:00
10:00-12:20 <b>Symposium 9</b> Lipid and Membrane Biophysics	10:00-12:20 <b>Symposium 10</b> Data Science for Integrated Dynamic Structural Biology	9:00-18:30 <b>Poster display and Exhibition</b>		10:00
				11:00
				12:00
12:20-13:50 <b>Break</b>				
12:35-13:35 <b>BP Seminar 5</b> (SIGMAKOKI CO., LTD.)	12:35-13:35 <b>BP Seminar 6</b> (On-chip Biotechnologies Co., Ltd)			13:00
		13:50-15:50 <b>Coffee break</b>	13:50-14:50 <b>Poster presentations: odd</b>	14:00
			14:50-15:50 <b>Poster presentations: even</b>	15:00
				16:00
16:00-18:20 <b>Sponsored Symposium 1</b> (MEXT KAKENHI Grant-in-Aid for Transformative Research Area (A) "Material properties determine body shapes and their constructions" and "Integration of Extracellular Information by Multimodal ECM Activity")	16:00-18:20 <b>Symposium 14</b> Data Science, Machine Learning, and Analytical Frameworks for Understanding the Heterogeneity of Cellular and Multicellular Systems			17:00
				18:00
		18:30-19:30 <b>Poster removal time</b>	18:30-20:00 <b>Kyoto Night</b>	19:00
				20:00
				21:00

# Program at a Glance

	Room A	Room B-1	Room B-2	Room C-2
8:00	8:00-8:50 <b>Morning Seminar 2</b> (GeneFrontier)			
9:00	9:00-9:50 <b>IUPAB Engstrom Lecture</b> Prof. Toshio Ando			
10:00	10:00-12:20 <b>Symposium 15</b> Single Molecule Biophysics with Advanced Techniques	10:00-12:20 <b>Symposium 16</b> Rotary ATPases	10:00-12:20 <b>Symposium 17</b> Protein Design & Engineering	10:00-12:20 <b>Symposium 18</b> Neural Systems and Excitable Cells
11:00				
12:00				
12:20-13:50 <b>Break</b>				
13:00	12:35-13:35 <b>BP Seminar 7</b> (Refeyn)	12:35-13:35 <b>BP Seminar 8</b> (HAMAMATSU PHOTONICS K.K.)		
14:00				
15:00				
16:00	16:00-16:40 <b>IUPAB Young Investigator Award Lecture</b>			
17:00	Prof. Hideaki Kato	16:40-17:30 <b>BPS Award Lecture</b> Prof. Jerelle A. Joseph		
18:00	17:30-18:20 <b>Keynote 2</b> Prof. Gerhard Hummer	17:30-18:20 <b>Keynote 3</b> Prof. Rong Li		
19:00	18:30-20:30 <b>General Assembly</b> (Voting delegates to attend (observers welcome))	12:35-13:35 <b>Mixer with Presidents and Secretaries</b> (Venue: Room B-2) *Invited only		
20:00				
21:00				

# Wednesday, June 26

Room D	Room E	Annex Hall	
			8:00
			9:00
10:00-12:20 <b>Symposium 19</b> Understanding Structure and Function of Emerging Viruses	10:00-12:20 <b>Symposium 20</b> Synthetic Biology	9:00-18:30 <b>Poster display and Exhibition</b>	10:00
12:20-13:50 <b>Break</b>			11:00
12:35-13:35 <b>BP Seminar 9</b> (Yokogawa Electric Corporation)	12:35-13:35 <b>BP Seminar 10</b>		12:00
	(Digital Bioassay Laboratory, The University of Tokyo and TOPPAN Holdings Inc.)		13:00
		13:50-15:50 <b>Coffee break</b>	14:00
		13:50-14:50 <b>Poster presentations: odd</b>	15:00
		14:50-15:50 <b>Poster presentations: even</b>	16:00
			17:00
			18:00
		18:30-19:30 <b>Poster removal time</b>	19:00
			20:00
			21:00

# Program at a Glance

	Room A	Room B-1	Room B-2	Room C-2
8:00	8:00-8:50 <b>Morning Seminar 3</b> (Avanti Polar Lipids)			
9:00		9:00-9:50 <b>IUPAB Ramachandran Lecture</b> Prof. David Baker		
10:00	10:00-12:20 <b>Symposium 21</b> Computational Molecular Biophysics	10:00-12:20 <b>Symposium 22</b> Bacterial/Archaeal Supermolecular Assembly	10:00-12:20 <b>Symposium 23</b> Optogenetics and Photobiology	10:00-12:20 <b>Symposium 24</b> Chromatin Dynamics and Imaging
11:00				
12:00	12:20-13:50 <b>Break</b>			
13:00	12:35-13:35 <b>BP Seminar 11</b> (NIKON SOLUTIONS CO.,LTD.)	12:35-13:35 <b>BP Seminar 12</b> (Refeyn)		
14:00				
15:00				
16:00	16:00-18:20 <b>Sponsored Symposium 2</b> JST PRESTO, Dynamic supra-assembly of biomolecular systems	16:00-18:20 <b>Symposium 26</b> Applications of Non-equilibrium Physics	16:00-18:20 <b>Symposium 27</b> DNA/Chromatin Physics	16:00-18:20 <b>Symposium 28</b> Membraneless Organella, Autophage, Liquid-liquid Phase Separation
17:00				
18:00	18:30-19:10 <b>The Bei Lecture</b> Prof. Xiyun Yan			
19:00				
20:00				
21:00				

# Thursday, June 27

Meeting Information

Room D	Room E	Annex Hall	Swan / Japanese Garden	
				8:00
				9:00
		9:00-18:30 <b>Poster display and Exhibition</b>		10:00
10:00-12:20 <b>Symposium 25</b> Biophysics of Disease	10:00-12:20 <b>Hands-on Training Session B</b> Visualizing the Nanometer World in Liquid by Bio-SPMs			11:00
12:20-13:50 <b>Break</b>				12:00
12:35-13:35 <b>BP Seminar 13</b> (Evident Corporation)	12:35-13:35 <b>BP Seminar 14</b> (Twist Bioscience)			13:00
		13:50-15:50 <b>Coffee break</b>	13:50-14:50 <b>Poster presentations: odd</b>	14:00
			14:50-15:50 <b>Poster presentations: even</b>	15:00
				16:00
16:00-18:20 <b>Symposium 29</b> Soft Matter Biophysics (by IUPAP)	16:00-18:20 <b>Asian Biophysics Association (ABA) Symposium</b>			17:00
				18:00
		18:30-19:30 <b>Poster removal time</b>		19:00
			19:20-21:20 <b>Conference Dinner</b> (Venue in case of rainy weather: Swan/Sakura)	20:00
				21:00

# Program at a Glance

	Room A	Room B-1	Room B-2	Room C-2
8:00				
9:00		9:00-9:50 <b>Keynote 4</b> Prof. Hannele Ruohola-Baker		
10:00	10:00-12:20 <b>Hands-on Training Session E</b> Exploring Multi-cellular Mechanics	10:00-12:20 <b>Symposium 30</b> Structure, Function and Biophysics of the Bacterial Motility and Flagellar Motor	10:00-12:20 <b>Symposium 31</b> Stem cells and Organoids	10:00-12:20 <b>Hands-on Training Session C</b> CHARMM-GUI/GENESIS MD Tutorial
11:00				
12:00				
12:20-13:50 <b>Break</b>				
13:00	12:35-13:35 <b>BP Seminar 15</b> (The Biophysical Society of Japan & Acaric.co.ltd.)		12:35-13:35 <b>BP Seminar 16</b> (Nagoya Institute of Technology & SHIMADZU CORPORATION)	
14:00				
15:00				
16:00	16:00-17:00 <b>Closing Ceremony</b>			
17:00				
18:00				
19:00		10:00-11:00 <b>Corporate Opinion Exchange Meeting</b> (Venue: Room 555) *Invited only		
20:00		13:50-15:50 <b>IUPAB New Council Meeting</b> (Venue: Room E) *Invited only		
21:00				

# Friday, June 28

Room D	Room E	Annex Hall	Kyoto University	
			8:00	
			9:00	
10:00-12:20 <b>Symposium 32</b> Origin of Life	10:00-12:20 <b>Symposium 33</b> Data Sharing and Open Science	9:00-16:00 <b>Poster display and Exhibition</b>	10:00	
			11:00	
12:20-13:50 <b>Break</b>				12:00
				13:00
		13:50-15:50 <b>Coffee break</b>	14:00	
			13:50-14:50 <b>Poster presentations: odd</b>	15:00
		14:50-15:50 <b>Poster presentations: even</b>	16:00	
		16:00-17:00 <b>Poster removal time</b>	16:15-16:45 <b>Registration</b>	
			17:00	
			16:45-18:45 <b>Public Lecture</b> (at Science Seminar House, Graduate School of Faculty of Science)	
			18:00	
			19:00	
			20:00	
			21:00	

# Hands-on Training Program

---

---

Hands-on Training Program

\*Pre-registered participants only.

## **Program A: Millions of single live cell analysis with the automated trans-scale-scope, AMATERAS**

Event dates: June 18-21

Venue: Osaka University (June 18-19), RIKEN Kobe Campus (June 20-21)

Learning image processing based on information engineering using AMATERAS (a cutting-edge biological microscope, A Multiple/Multiscale Analytical Tool for Every Rare Activity in Singularity) by Osaka University and RIKEN.

## **Program B: Visualizing the nanometer world in liquid by Bio-SPMs**

Event dates: July 1

Venue: Kanazawa University

One day tour to Kanazawa University to learn about Bio-SPM technologies (super-resolution AFM (FM-AFM & 3D-AFM), high-speed AFM, SICM, AFM for Cell measurement). Participants are given priority to participate in the Bio-SPM summer school conducted annually.

Note: An additional application is required in advance to participate in the Bio-SPM summer school.

## **Program C: CHARMM-GUI/GENESIS MD tutorial**

Event dates: June 30-July 2

Venue: RIKEN Kobe Campus

CHARMM-GUI/GENESIS Workshop held in Kobe to learn MD simulations.

## **Program D: DNA nanomachine tutorial**

Event dates: June 22

Venue: Kansai University

Molecular robotics is a new academic field that aims to create systems that can be called robots using molecules designed from scratch as components. We are pleased to offer a hands-on



---

---

program for those interested in molecular robotics to learn the basics of design and evaluation of DNA nanomachines in a short period of time. The program is open to anyone, regardless of specialty or background.

(Sponsored by Grant-in-Aid for Transformative Research Areas (A) “Molecular cybernetics”)

**Program E: Exploring multi-cellular mechanics**

Event dates: June 29

Venue: Kyoto University

This hands-on session will provide an introduction to imaging and image analysis of multi-cellular systems such as tissue and embryo. Participants will learn how to handle these specimens, take images (2D, 3D), and extract biophysical parameters by image analysis.

**Program F: Real-time single-molecule experiments with optical tweezers and correlated fluorescence microscopy**

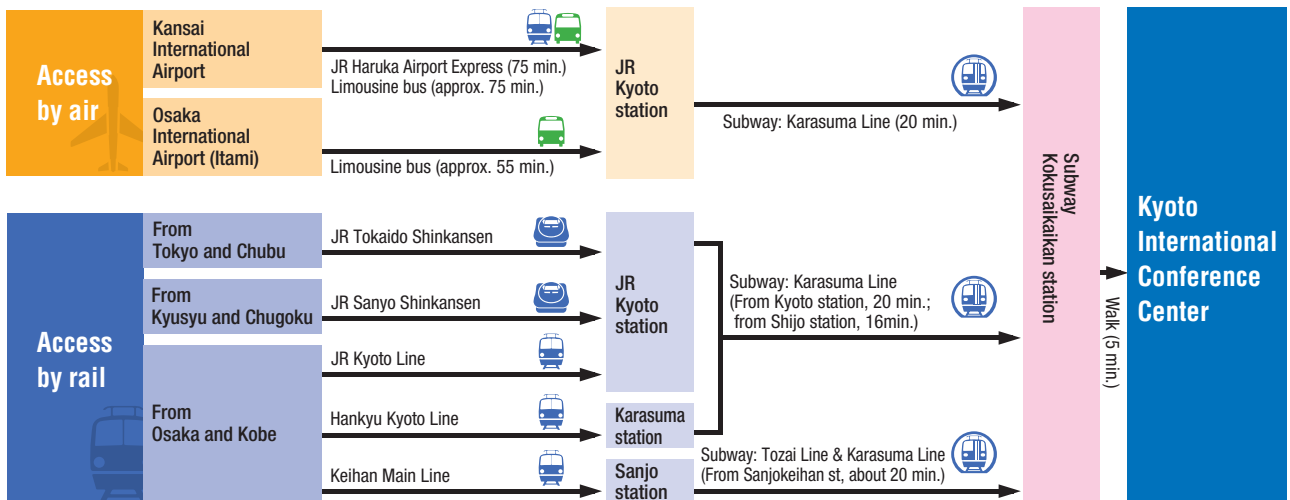
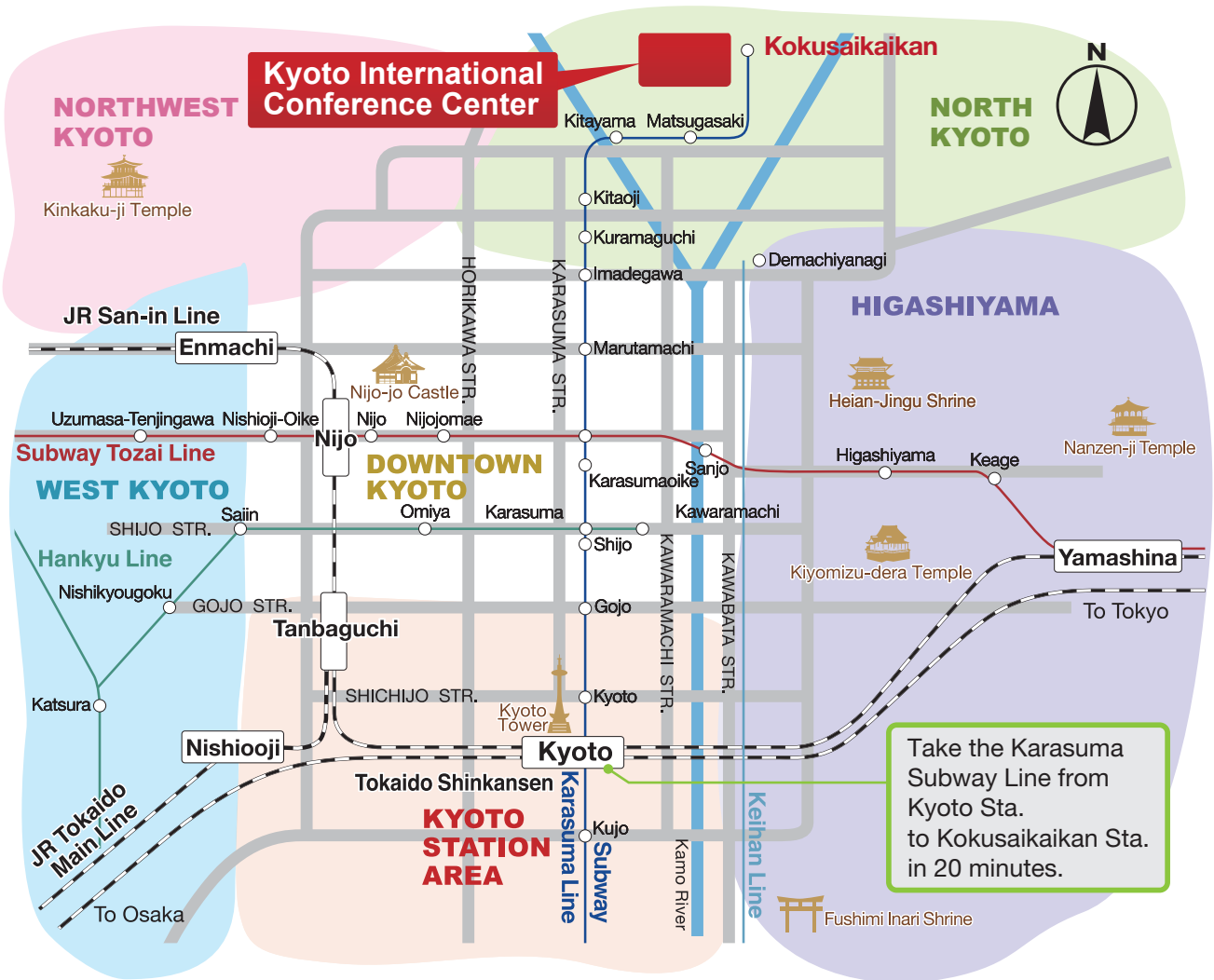
Event dates: June 22-23

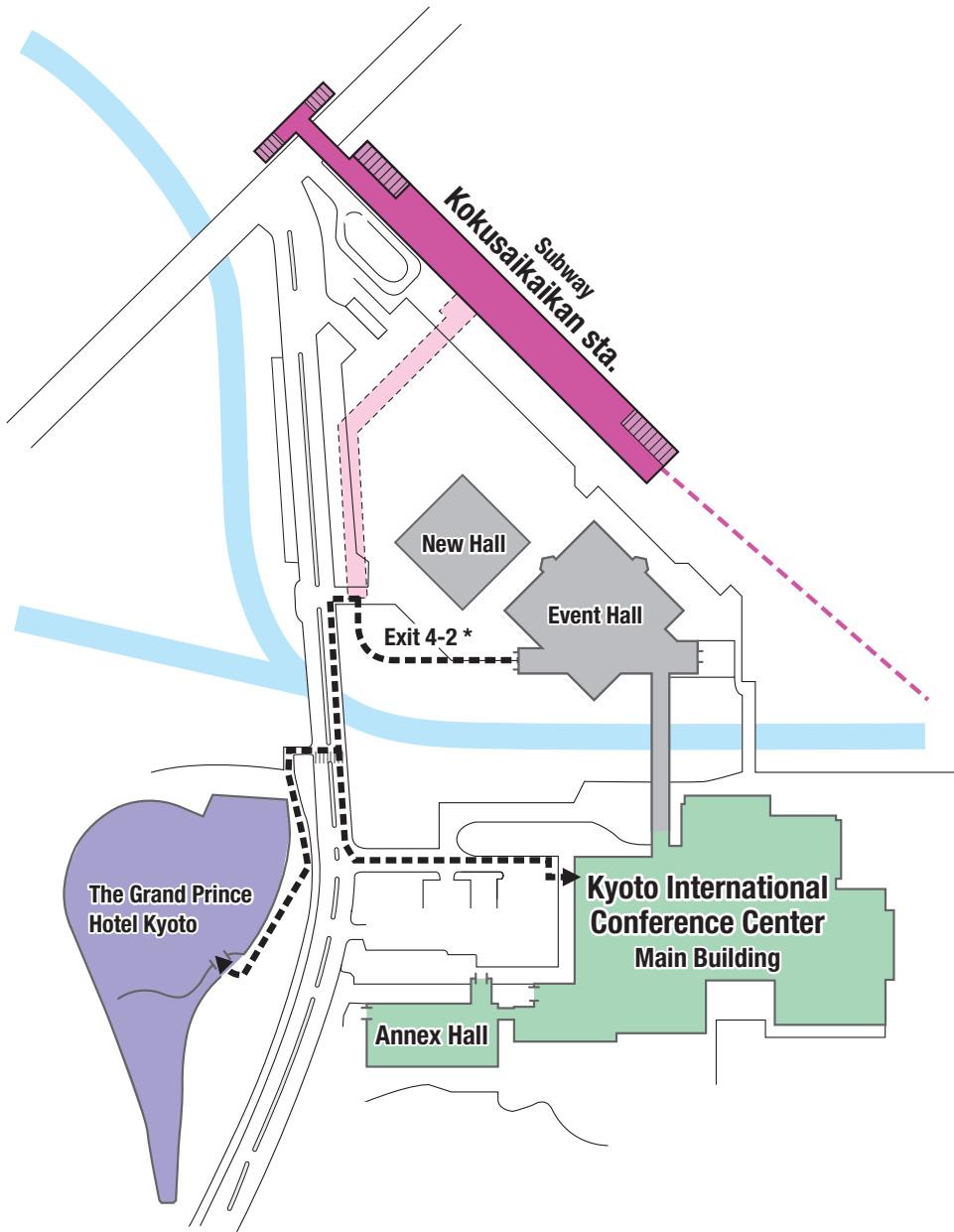
Venue: Institute for Quantitative Bioscience, The University of Tokyo

# Venue Access

## Kyoto International Conference Center

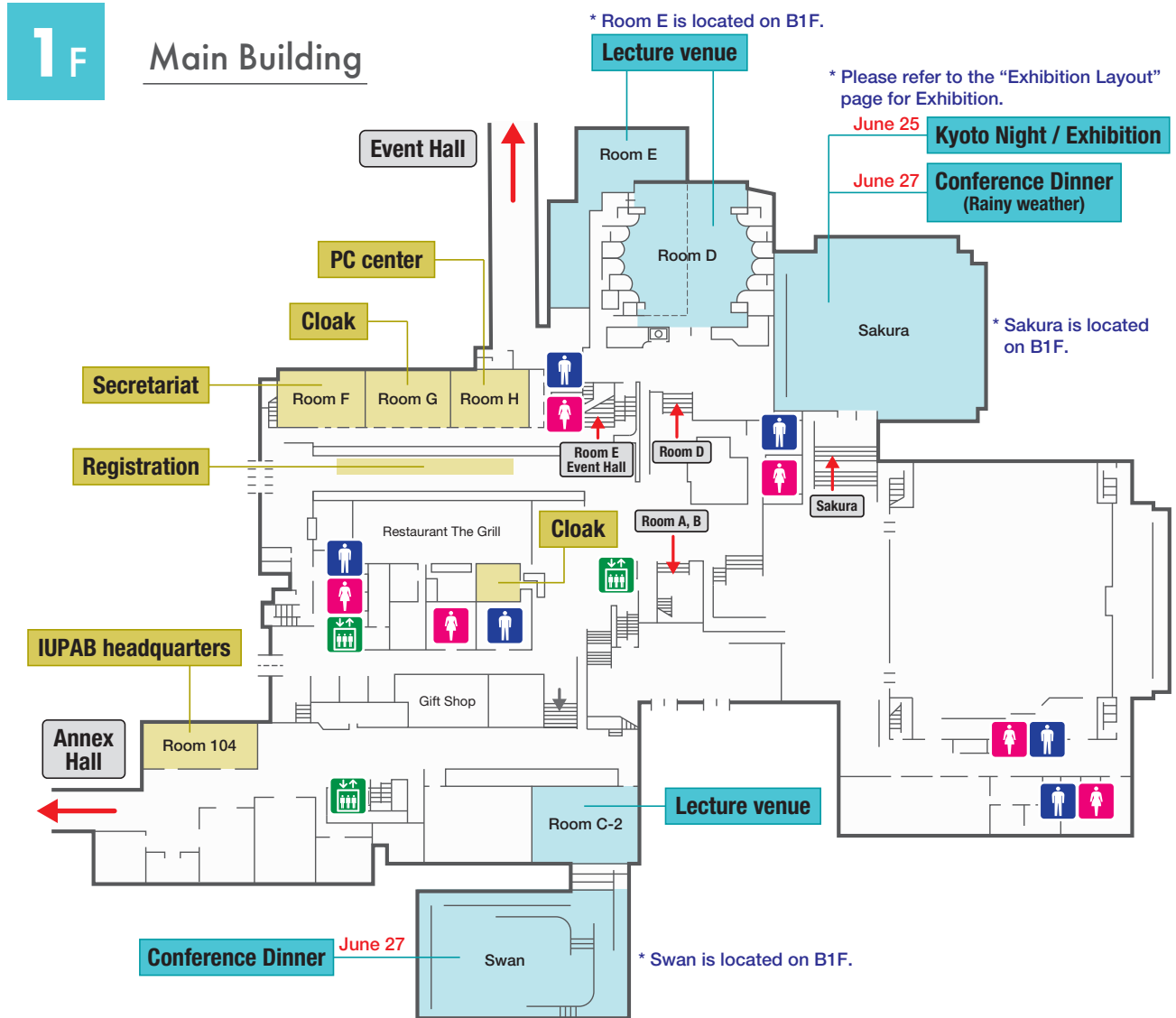
422 Iwakura Oosagi-cho, Sakyo-ku, Kyoto city





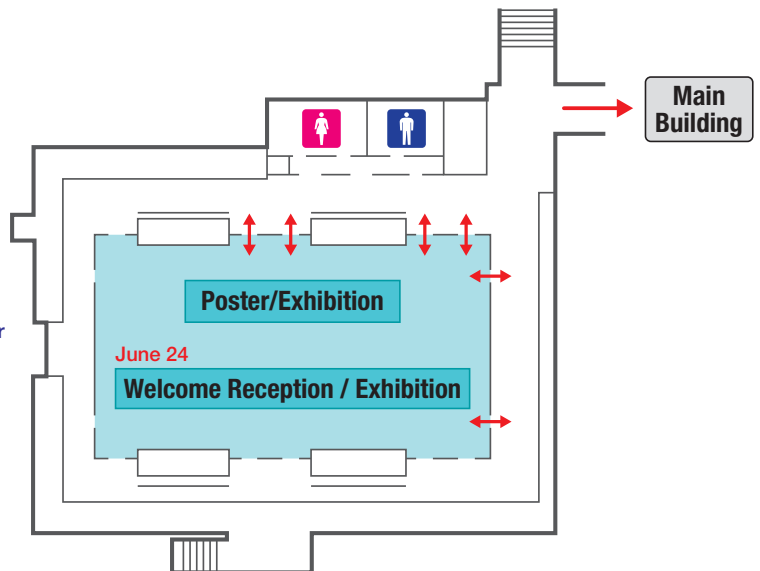
\* Exit the ticket gate and walk through the underground passage to Exit 4-2.  
The covered walkway from Exit 4-2 will guide you to our front entrance, keeping you dry on rainy days.

# Floor Plan



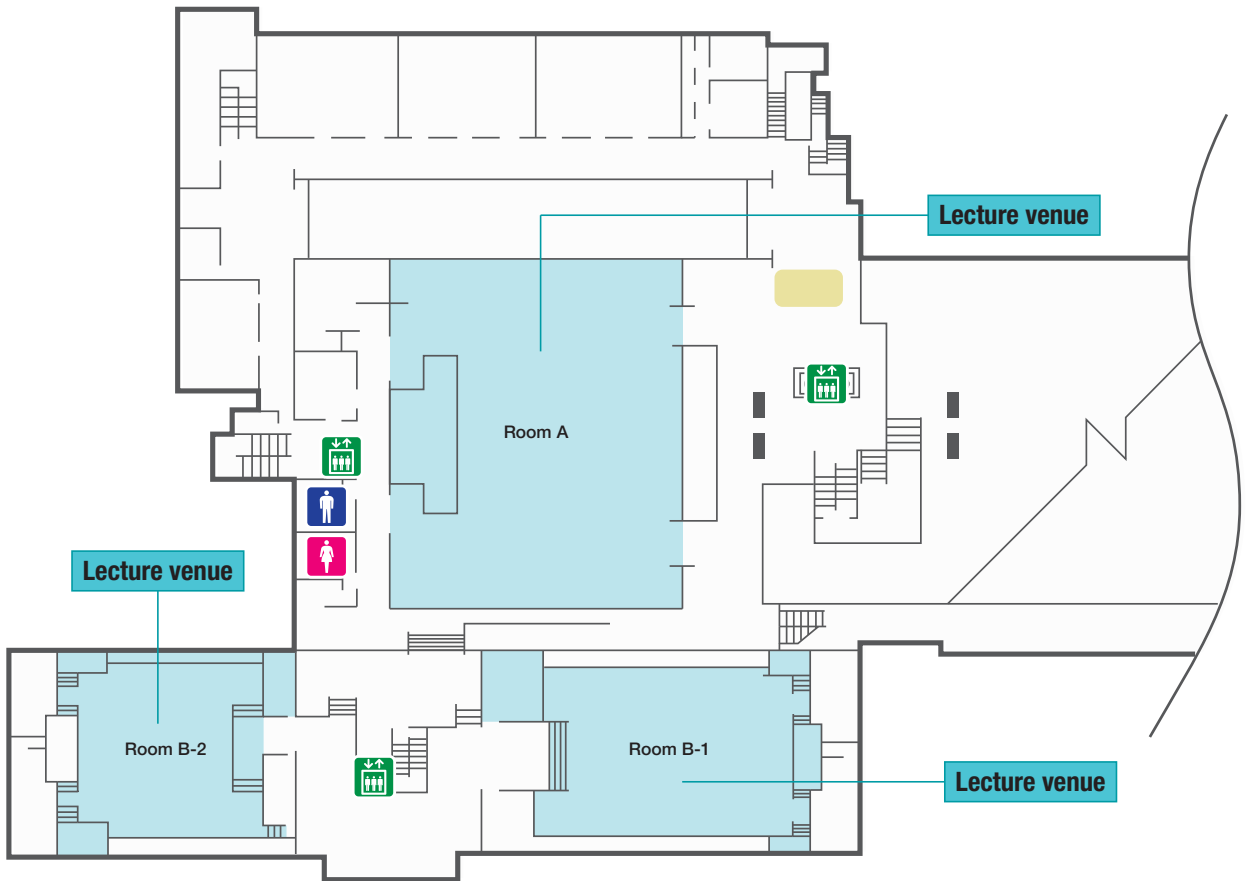
## Annex Hall

\* Please refer to the "Poster Layout" page for Poster and to the "Exhibition Layout" page for Exhibition.



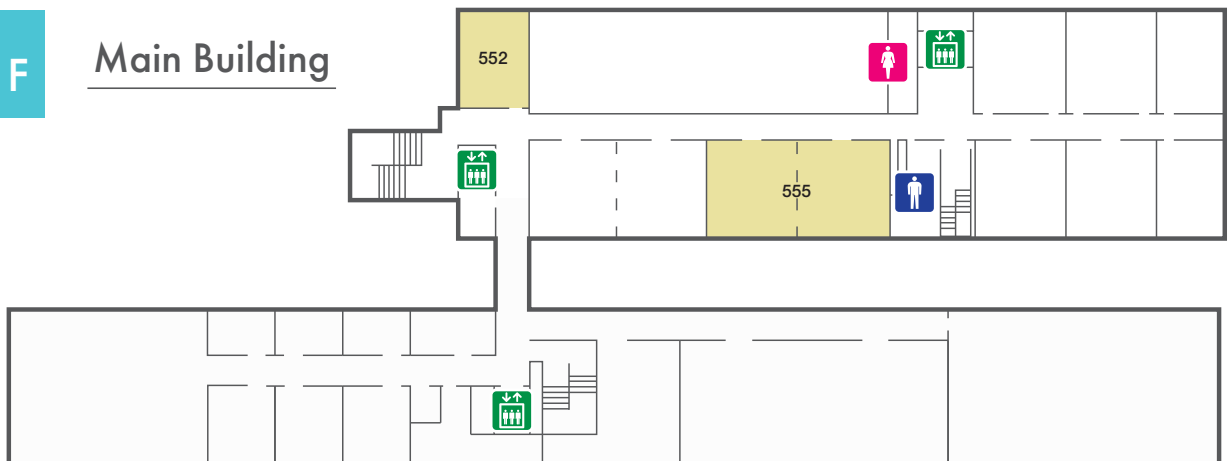
**2 F**

Main Building



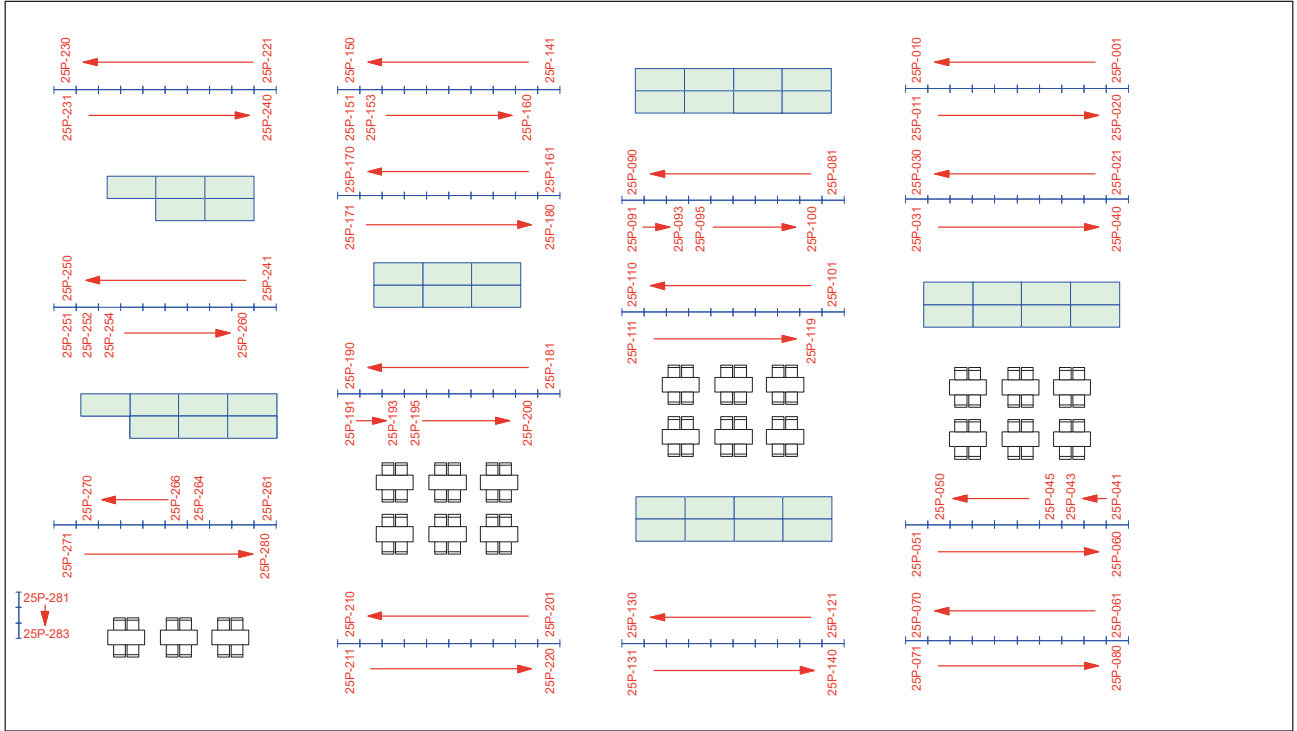
**5 F**

Main Building

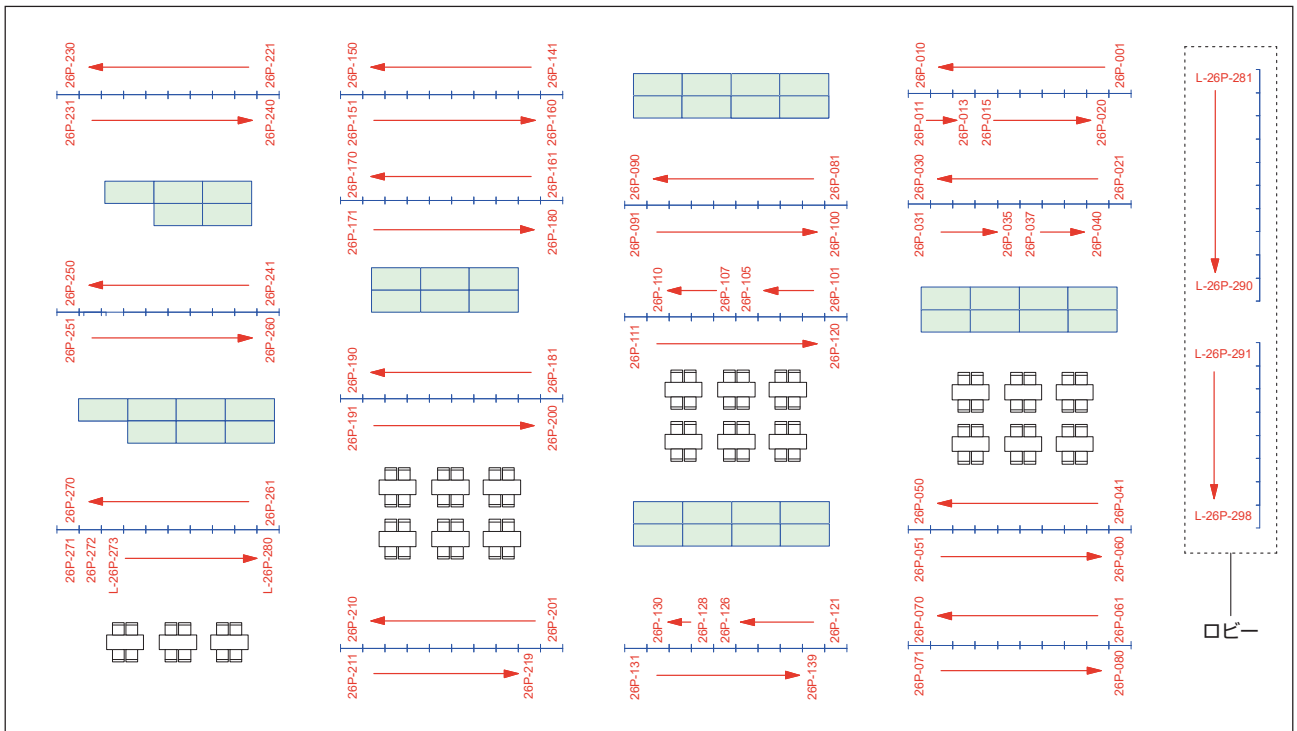


# Poster Layout

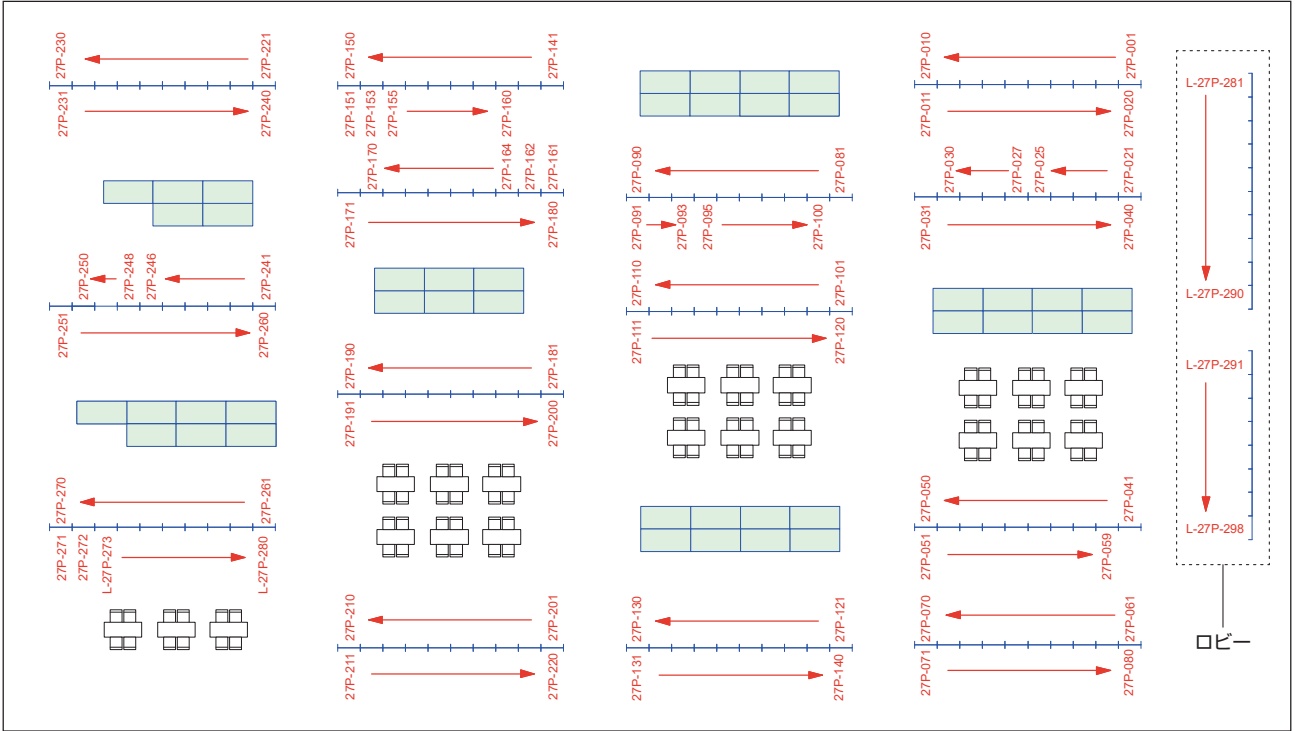
## June 25 [TUE]



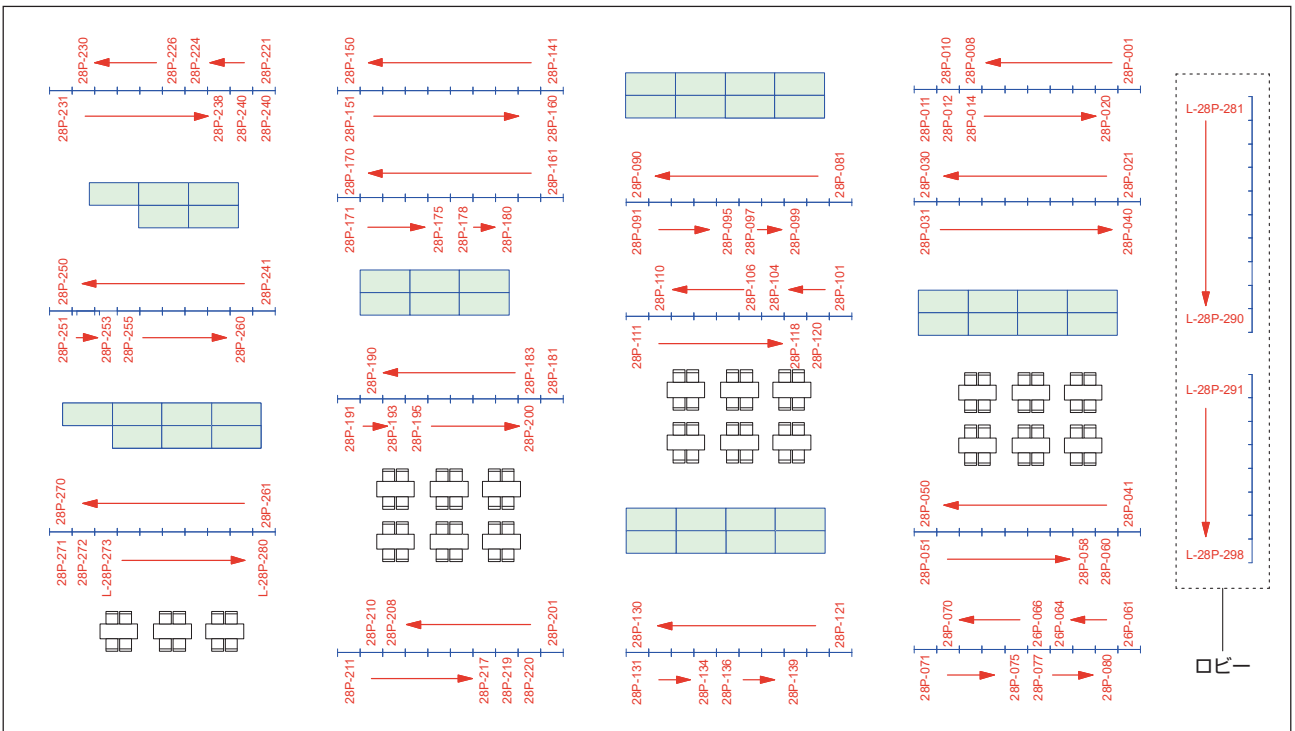
## June 26 [WED]



June 27 [THU]

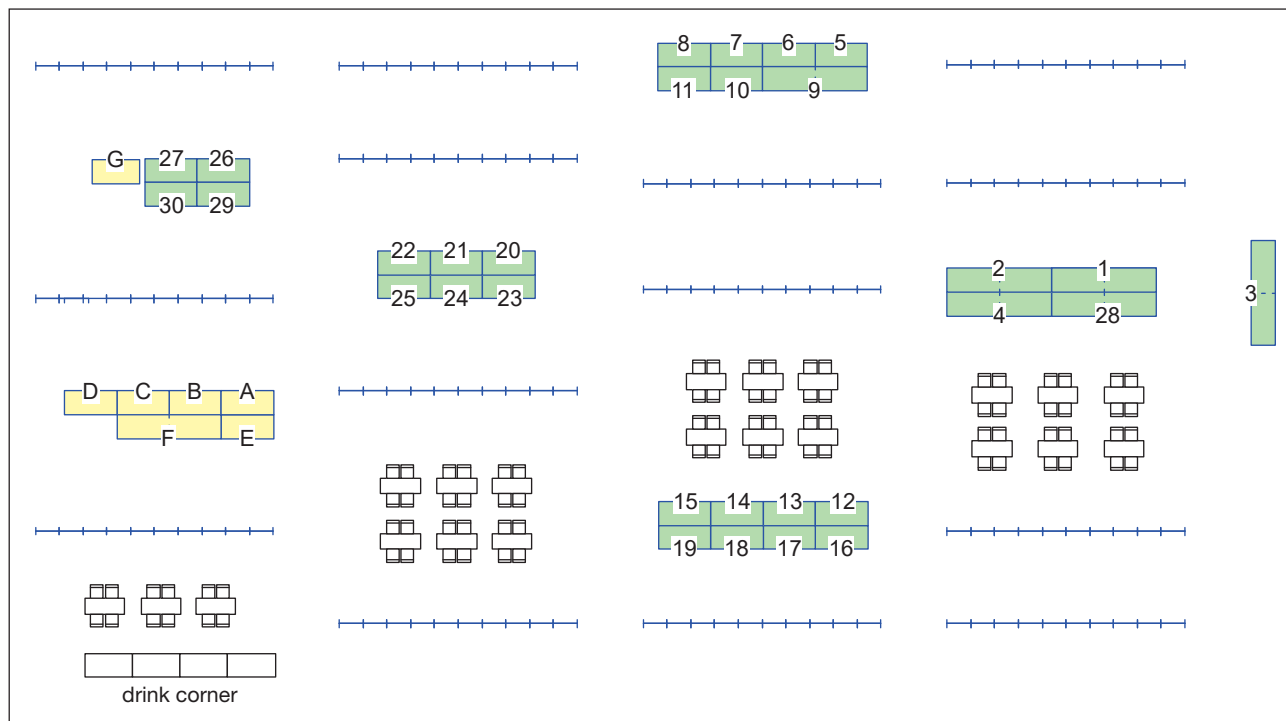


June 28 [FRI]



# Exhibition Layout

## Annex Hall (June 25 [TUE] – 28 [FRI])



No.	Exhibitor	No.	Exhibitor
1	BLAST Inc.	21	Research Institute of Biomolecule Metrology Co., Ltd.
2	Oxford Instruments K.K.	22	Bruker Japan K.K.
3	Nikon Solutions	23	Yokogawa Electric Corporation
4	Evident Corporation	24	SIGMAKOKI CO., LTD.
5	On-chip Biotechnologies Co., Ltd	25	Japan Laser Corporation
6	TOKYO OHKA KOGYO CO., LTD.	26	FUJIFILM Wako Pure Chemical Corporation
7	NanoAndMore Japan K.K.	27	Yamato Scientific Co., Ltd.
8	HORIBA, Ltd.	28	Quantum Design Japan
9	ORIENTAL GIKEN INC.	29	Pinpoint Photonics, Inc.
10	Chroma Technology Japan	30	CellFree Sciences Co., Ltd
11	Nanon Technologies Japan K.K.	A	Nakatani Foundation for Advancement of Measuring Technologies in Biomedical Engineering
12	JEOL Ltd.	B	Japan Synchrotron Radiation Research Institute (JASRI)
13	Refeyn	C	Worldwide Protein Data Bank
14	Carl Zeiss Co. Ltd.	D	The DNA Bank, RIKEN BioResource Research Center (RIKEN BRC DNABank)
15	Avanti Polar Lipids	E	Japan Agency for Medical Research and Development
16	TAITEC CORPORATION	F	The Biophysical Society of Japan
17	Thorlabs Japan Inc.	G	Clinica Publishers, LLC
18	Kiko Tech Co., Ltd.		
19	Tokai Hit Co., Ltd.		
20	HAMAMATSU PHOTONICS K.K.		



# For Participants

## Registration Desk

Location:	Main Entrance Lobby, 1F, Kyoto International Conference Center (ICC Kyoto)	
Opening hours:	Monday, June 24	11:30-16:30
	Tuesday, June 25	07:30-16:30
	Wednesday, June 26	07:30-16:30
	Thursday, June 27	07:30-16:30
	Friday, June 28	08:00-11:00

<Participants who have completed pre-registration>

- Your name card, certificate of participation and receipt can be downloaded from the “My Page” portal.
- Please download and print out your name card beforehand, and bring it with you.
- If you have forgotten to bring your name card, please present the QR code sent to your email at the Registration Desk, and your name card will be issued onsite.

<Participants registering on the day of the meeting>

- Please register on the day of the meeting using your own smartphone or PC onsite. Payment is by credit card only.

<Please wear your name card>

All participants are requested to wear their name card at all times in the congress venue.

## Registration fees:

Registration Category		Early Bird November 1, 2023- April 30, 2024 JST (UTC+9)	Standard May 1, 2024- June 28, 2024 JST (UTC+9)	On-Demand Only June 29, 2024- July 31, 2024 JST (UTC+9)
Delegate	Member <sup>1)</sup>	JPY 50,000	JPY 70,000	JPY 30,000
	Non-Member	JPY 70,000	JPY 90,000	JPY 40,000
Student <sup>2)</sup>	Member <sup>1)</sup>	JPY 30,000	JPY 40,000	JPY 20,000
	Non-Member	JPY 50,000	JPY 60,000	JPY 30,000
Accompanying Person <sup>3)</sup>		JPY 10,000		
Conference Dinner		JPY 10,000		

# For Participants

- 1) Membership prices apply if you are a member of a national biophysical society.
- 2) Students are asked to submit a valid student ID.
- 3) Up to 5 accompanying persons can be registered.

## Registration fees include:

	Onsite participants	On-demand participants	Accompanying persons
Onsite participation in all sessions	✓		
On-demand viewing of sessions	✓	✓	
Exhibition	✓		
Abstract book (online)	✓	✓	
Congress materials	✓		
Handy Program Book	✓		
Welcome Reception	✓		✓
Kyoto Night	✓		✓
Conference Dinner	Please register for Conference Dinner (JPY 10,000 per person)		Please register for Conference Dinner (JPY 10,000 per person)

- Registrants and accompanying persons who have paid their registration fees are invited to the Welcome Reception and Kyoto Night.

## On-demand streaming

<Dates>

Streaming period	Monday, July 1 – Wednesday, July 31
Registration period	Saturday, June 29 – Wednesday, July 31
Streamed sessions	Plenary Lectures and Keynote Lectures (other sessions are onsite only)

<How to view the on-demand sessions>

On-demand streaming is only available for registered participants. Those who have completed their registration and payment will receive their unique ID for access to the on-demand streaming

page. Please note that the ID is unique to the individual registrant and cannot be shared with anyone else.

Taking pictures, copying, or downloading of the video or content of the broadcast is strictly prohibited. If any of these actions are discovered or suspected, necessary measures, such as contacting the offending participant's affiliated institution, will be taken accordingly.

### Official Language

All sessions will be held in English.

### Abstract

<From the congress website>

Abstracts are posted on the congress website in PDF format. Please use the following password to view the abstracts.

Password: iupab2024kyoto

<From the online system>

Abstracts are also posted on the online system. Please login to your "My Page" and click "Time Table" button to view abstracts for each session.

### Food and Beverage

Morning Seminars:	Danish pastries
BP Seminars (Luncheon Seminars) <sup>1)</sup> :	Boxed sandwiches and Japanese bento (advance application required)
Coffee Breaks <sup>2)</sup> :	Coffee and refreshments

<sup>1)</sup> Pre-registered users only. There will be no lunch boxes sold onsite.

\* Once a registration for a BP Seminar is made, no cancellations will be accepted.

\* Lunch tickets are printed on your name card and will be checked onsite.

<sup>2)</sup> Coffee breaks will be served after lunch at the Refreshments Corner, located in Annex Hall.

Monday, June 24	15:00-17:00
Tuesday, June 25	13:50-15:50
Wednesday, June 26	13:50-15:50
Thursday, June 27	13:50-15:50
Friday, June 28	13:50-15:50

# For Participants

---

## Congress Bags

Congress bags will be distributed at the Registration Desk.

## Poster Display and Exhibition

Location: Annex Hall, Kyoto International Conference Center

Exhibition hours: Monday, June 24 12:00-17:00

Tuesday, June 25 09:00-18:30

Wednesday, June 26 09:00-18:30

Thursday, June 27 09:00-18:30

Friday, June 28 09:00-16:00

## Digital Point Rally

During the event you can visit the designated exhibition booths and collect points by scanning the QR codes located in each booth using your smartphone. You will need to sign in to your “My Page”, choose “Point Rally” menu and allow your camera use to scan the QR codes. The participants who have gathered 10 or more points will enter the draw, and the winners will receive their prizes at the Closing Ceremony.

Location: Annex Hall, 1F, Kyoto International Conference Center

Date & time: Monday, June 24 12:00 - Friday, 28 June 12:00

## Cloakroom

The cloakroom service is available during the following hours.

Location 1: Room G, 1F, Kyoto International Conference Center

Location 2: Permanent Cloakroom, 1F, Kyoto International Conference Center

Opening hours: Monday, June 24 11:30-19:30

Tuesday, June 25 07:30-20:30

Wednesday, June 26 07:30-21:00

Thursday, June 27 07:30-21:30

Friday, June 28 08:00-17:30

\* Valuables, non-folding umbrellas, or congress bags cannot be accepted.

## Social Events

### IUPAB 2024 Opening Ceremony

Location: Room A, Kyoto International Conference Center  
 Date & time: Monday, June 24 12:30-13:10  
 Performance: Musical performance of traditional Japanese instruments by AUN & HIDE

### Welcome Reception

Location: Annex Hall  
 Date & time: Monday, June 24 17:50-19:15  
 Performance: Piano performance by Fuyuco  
 Food & beverage: Drinks and snacks  
 Fee: Free of charge

### Kyoto Night

Location: Sakura  
 Date & time: Tuesday, June 25 18:30-20:00  
 Performance: Jazz band  
 Food & beverage: Sake and snacks  
 Fee: Free of charge

### Conference Dinner

Location: Swan Garden / Sakura (depending on the weather)  
 Date & time: Thursday, June 27 19:20-21:20  
 Style: Buffet  
 Performance: *Gagaku* (Japanese imperial court music) and a Kyoto rock band  
 Fee: JPY 10,000  
 Award ceremony: Nakatani Foundation Award  
 BPS Student Award

### IUPAB 2024 Closing Ceremony

Location: Room A, Kyoto International Conference Center  
 Date & time: Friday, June 28 16:00-17:00  
 Award ceremony: IUPAB2024 Student and Early Career Researcher Poster Award

# For Participants

---

---

## Additional Events

### IUPAB2024 Eve Fest

Location: Tenchikan, Kyoto Sangyo University

Date & time: Sunday, June 23 13:00-20:00

Fee: Free of charge

\*A separate fee (JPY 2,000) is required to attend the social gathering.

\*Pre-registered participants only.

### Public Lecture

Location: Science Seminar House, Graduate School of Faculty of Science, Kyoto University

Date & time: Friday, June 28 16:45-18:45 (Doors open at 16:15)

Fee: Free of charge

\*Please register in advance on the website below (Japanese only):

<https://theory.biophys.kyoto-u.ac.jp/iupab-public-seminar>

## Wi-Fi Access

A Wi-Fi service is available free of charge in public spaces and Event Hall of the Kyoto International Conference Center.

Select the following network: ICCK\_Public\_WiFi (No password required)

## Recordings and Photography

Audio recording, photography, and video recording are strictly prohibited in all venues.

## Smoking

All indoor areas are non-smoking.

## Lost and Found

Lost property will be kept at the Registration Desk (Main Entrance Lobby, 1F) until Friday, June 28 11:00.

### **Inquiries**

[During the event]

Inquiry Desk: Room F, 1F, ICC Kyoto

[Before/after the event]

IUPAB2024 Secretariat Office

c/o Convention Linkage, Inc.

2 Sanbancho, Chiyoda-ku, Tokyo 102-0075, Japan

E-mail: [iupab2024-kyoto@c-linkage.co.jp](mailto:iupab2024-kyoto@c-linkage.co.jp)

# For Presenters

Session	Presentation Format	Presentation Time	Data Check on the day of your presentation
All Oral Sessions	Onsite only	As per the information provided to you by your chairperson	Submit your presentation slides to the PC center no later than 45 min. prior to your session's start (if your session is the very first session of the day, no later than 30 min. before the session starts).
Poster Presentation	Onsite only	Please check your Poster number. Presentation time is organized by whether the last part (suffix after hyphen) of the Poster number is odd or even. Odd number: 13:50-14:50 Even number: 14:50-15:50	Posting schedule is listed below.

## 1. Oral Presentations

If you will be making an oral presentation, please check the following information.

Preparing for your onsite presentation:

- Screen aspect ratio is 16:9. Slides created in 4:3 format will be shown on the screen with black bands on both sides of the slides.
- We recommend that you use OS-standard fonts in your presentation, such as Century Gothic, Courier, Times New Roman.
- Supported software: Windows PowerPoint 2019 and PowerPoint for Microsoft 365.
- If your presentation slides include any video or audio files, please save them in one folder with your slide data.

On your presentation day:

### **No later than 30 min. before the session starts**

- Please visit the PC Center to submit your presentation file. You will be given a short technical instruction.



## PC Center

Location: Room H, 1F, Kyoto International Conference Center

Opening hours: Monday, June 24 11:30-16:00  
 Tuesday, June 25 07:30-16:00  
 Wednesday, June 26 07:30-16:00  
 Thursday, June 27 07:30-16:00  
 Friday, June 28 08:00-12:00

- If you wish to use your own PC:
  - The Secretariat will prepare an HDMI PC cable connector. If your PC is not compatible with this cable connector, please bring a suitable adaptor.
  - Please notify the operator in advance if you will be using video or audio in your presentation.
  - Your presentation file should be named <Session Number>\_<Your Full Name>.ppt, and be saved on your desktop.
  - Please disable your screensaver and any power-saving features on your PC.
  - Please bring your AC adapter and converter with you.
  - Please bring your presentation's backup data on a USB flash drive.
  - After your presentation, do not forget to retrieve your computer from the operator at the venue.
  - During your presentation, please use the AC adapter included with your computer, not a mini-AC adapter.

**No later than 10 min. before the session starts**

- Please make sure to come to the session room and take the speaker's seat at the left front side of the room.

After the Congress:

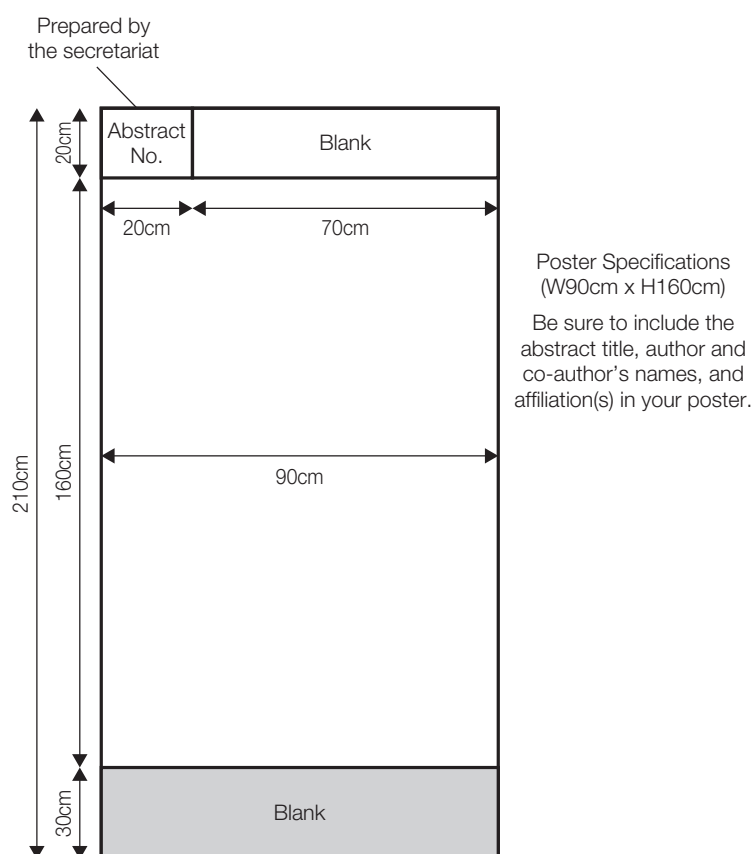
- Your submitted data will be discarded after the congress.

# For Presenters

## 2. Poster Presentations

To present your poster onsite, please follow the steps below:

- Be sure to include the abstract title, author and coauthor names, and the affiliation(s).
- Prepare your poster to fit on the poster board (W90cm x H210cm). Recommended poster size is W90cm x H160cm.



- Bring your poster with you to the Annex Hall of Kyoto International Conference Center on the day of your poster presentation.

### Poster set-up/removal times

Presentation date	Set-up	Removal
June 25	June 24 12:00-17:00 or June 25 08:00-09:00	18:30-19:30
June 26	08:00-09:00	18:30-19:30
June 27	08:00-09:00	18:30-19:30
June 28	08:00-09:00	16:00-17:00

\* Posters that are left on the poster boards after the removal time has ended will be removed and discarded by the Secretariat after the Congress.

# Oral Sessions

---

# Oral Sessions

# Monday, June 24

## Plenary IUPAB Katchalsky Lecture

Room A

13:30-14:20 **Exploration of Biological Diversity**

Chair Takeharu Nagai (Osaka University)

### PL-1 Exploration of Biological Diversity

Feng Zhang<sup>1,2,3</sup>

<sup>1</sup>Howard Hughes Medical Institute, <sup>2</sup>Broad Institute of MIT and Harvard, <sup>3</sup>McGovern Institute for Brain Research, Department of Brain and Cognitive Sciences, Department of Biological Engineering, Massachusetts Institute of Technology

## Symposium 1

Room A

14:30-16:50 **Super-resolution and Advanced Microscopy Imaging**

Chairs Takano bu Katoh (The University of Tokyo)

Elizabeth Hinde (School of Physics, Faculty of Science, The University of Melbourne)

### S1-1 Cryo-optical microscopy for super-resolution imaging of the moment

Katsumasa Fujita<sup>1,2</sup><sup>1</sup>Osaka University, <sup>2</sup>AIST

### S1-2 3D architectural dynamics of super-molecular assembly in live cells by using single molecule orientation imaging with advanced fluorescence polarization probes

Tomomi Tani<sup>1</sup>, Nori Nakai<sup>2</sup>, Keisuke Sato<sup>2</sup>, Kenta Saito<sup>2</sup>, Sumio Terada<sup>2</sup>

<sup>1</sup>Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology, <sup>2</sup>Graduate School of Medicine, Tokyo Medical and Dental University

### S1-3 Ångström-resolution fluorescence microscopy

Luciano A. Masullo<sup>1</sup>, Susanne Reinhardt<sup>1,2</sup>, Isabelle Baudrexel<sup>1,3</sup>,Philipp Steen<sup>1,2</sup>, Rafal Kowalewski<sup>1,2</sup>, Alexandra Eklund<sup>1,3</sup>,Sebastian Strauss<sup>1,2</sup>, Eduard Unterauer<sup>1,2</sup>, Thomas Schlichthaerle<sup>1,2</sup>,Maximilian Strauss<sup>1,2</sup>, Christian Klein<sup>3,4</sup>, Ralf Jungmann<sup>1,2</sup>

<sup>1</sup>Max Planck Institute of Biochemistry, Planegg, Germany, <sup>2</sup>Faculty of Physics and Center for NanoScience, Ludwig Maximilian University, Munich, Germany,

<sup>3</sup>Department of Chemistry and Biochemistry, Ludwig Maximilian University, Munich, Germany, <sup>4</sup>Roche Innovation Center Zurich, Roche Pharma Research and Early Development, Schlieren, Switzerland

**Monday, June 24**

- S1-4**      **Fluorescence fluctuation spectroscopy of protein transport as a function of oligomeric state**  
Elizabeth Hinde, Ashleigh Solano, Xiaomeng Zhang  
 University of Melbourne
- S1-5**      **Biophysical Characterization of Cancer Metabolism: Multiparametric Imaging and Phenotypic Tracking in Mitochondrial Dynamics**  
Michelle Digman, Giulia Tedeschi, Lorenzo Scipioni, Austin Lefebvre, Francesco Palomba  
 Department of Biomedical Engineering and the Laboratory for Fluorescence Dynamics, University of California Irvine, Irvine, CA, USA
- S1-6**      **Immotile cilia mechanically sense the direction of fluid flow for left-right determination**  
 Takanobu A. Katoh<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. Med., The Univ. of Tokyo, Tokyo, Japan, <sup>2</sup>BDR., Riken, Kobe, Japan

**Symposium 2****Room B-1**

14:30-16:50

**Morphogenesis during Development and Repair**

Chairs

Satoru Okuda (Nano Life Science Institute, Kanazawa University)

Yanlan Mao (Laboratory for Molecular Cell Biology, University College London)

- S2-1**      **Mechano-hydraulic control of mammalian ovarian follicle development**  
Chii Jou Chan<sup>1,2</sup>, Arikta Biswas<sup>1</sup>, Boon Heng Ng<sup>1</sup>, Yuting Lou<sup>1</sup>, Kim Whye Leong<sup>1</sup>, Jake Turley<sup>1</sup>  
<sup>1</sup>Mechanobiology Institute, National University of Singapore, Singapore, <sup>2</sup>Department of Biological Sciences, National University of Singapore, Singapore
- S2-2**      **A 3D Vertex Model to analyse the Drosophila wing disc during wound healing**  
Pablo Vicente Munuera<sup>1</sup>, Jose J Muñoz<sup>2</sup>, Yanlan Mao<sup>1</sup>  
<sup>1</sup>Laboratory for Molecular Cell Biology, University College London, London, UK,  
<sup>2</sup>Laboratori de Càlcul Numèric (LaCàN), Centre Internacional de Mètodes Numèrics en Enginyeria (CIMNE), Universitat Politècnica de Catalunya (UPC), Barcelona, Spain
- S2-3**      **Comparative study of interspecies diversity in cortical stiffness using atomic force microscopy**  
Misato Iwashita, Yoichi Kosodo  
 Korea Brain Research Institute

# Oral Sessions

- S2-4**      **Robust cytoplasmic partitioning by resolving an intrinsic cytoskeletal instability**  
Melissa Rinaldin<sup>1,2,3</sup>, Alison Kickuth<sup>1,2,3</sup>, Benjamin Dalton<sup>4</sup>, Yitong Xou<sup>5</sup>, Stefano Di Talia<sup>5</sup>, Jan Brugués<sup>1,2,3</sup>  
<sup>1</sup>Cluster of Excellence Physics of Life, TU Dresden, Dresden, 01307 Germany, <sup>2</sup>Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, 01307 Germany, <sup>3</sup>Center of Systems Biology Dresden, 01307 Germany, <sup>4</sup>Department of Physics, Freie Universität Berlin, Berlin, 14195 Germany, <sup>5</sup>Department of Cell Biology, Duke University Medical Center, Durham, NC 27710 USA
- S2-5**      **“Telescope model” for coordinated organ morphogenesis and stem cell formation**  
 Ritsuko Morita  
 Graduate School of Frontier Biosciences, Osaka University
- S2-6**      **The role of nuclear properties and packing for movements in pseudostratified epithelia**  
 Mariana Gil, Lucrezia Ferme, Caren Norden  
 Instituto Gulbenkian de Cienca, Oeiras, Portugal

## Symposium 3

Room B-2

14:30-16:50      **Cryo Electron Microscopy and Tomography**

Chairs

Fei Sun (CAS)

Masahide Kikkawa (Graduate School of Medicine, The University of Tokyo)

- S3-1**      **In-cell structure of microtubule doublet in mouse sperm flagella reveals the structural stability essential for motility**

Fei Sun

National Key Laboratory of Biomacromolecules, CAS Center for Excellence in Biomacromolecules, Institute of Biophysics, Chinese Academy of Sciences, Beijing 100101, China.

- S3-2**      **Combination of genetics and cryo-electron tomography to study the calcium-dependent regulation of outer arm dynein in zebrafish sperm**

Hiroshi Yamaguchi, Motohiro Morikawa, Masahide Kikkawa

Department of Cell Biology and Anatomy, Graduate School of Medicine, The Univ. of Tokyo

**Monday, June 24**

- S3-3**      **Deciphering the Mechanism of Ribosomal Methylase Mediated Antibiotic Resistance**  
Ruchi Anand  
Department of Chemistry, Indian Institute of Technology Bombay, Mumbai India 400076
- S3-4**      **Structural physiology of gastric proton pump and related cation pumps**  
Kazuhiro Abe<sup>1,2</sup>  
<sup>1</sup>Graduate School of Science, Hokkaido University, Sapporo, Japan, <sup>2</sup>Cellular and Structural Physiology Institute, Nagoya University, Nagoya, Japan
- S3-5**      **CryoEM brings new mechanistic insights into double-stranded DNA break repair**  
Gabriel Lander, Chris Zerio  
Scripps Research, La Jolla CA 92037, USA
- S3-6**      **Structural Studies of SLC Transporters Relevant to Health and Diseases**  
Yongchan Lee  
Graduate School of Medical Life Science, Yokohama City University, Kanagawa, Japan

**Symposium 4****Room D**

14:30-16:50

**Correlative Cell Imaging**

Chairs

Tokuko Haraguchi (Frontier of Biosciences, Osaka University)

Ioanna Mela (Department of Pharmacology, University of Cambridge)

Tomonobu Watanabe (Center for Biosystems Dynamics Research/Research Institute for Radiation Biology and Medicine, RIKEN/Hiroshima University)

**S4-1****Correlative Atomic Force Microscopy with Super-resolution Microscopy for the characterisation of biological specimens**

Ioanna Mela

University of Cambridge, Department of Pharmacology

# Oral Sessions

## S4-2 The endoplasmic reticulum connects to the nucleus by constricted junctions that mature after open mitosis in mammalian cells

Helena Bragulat-Teixidor<sup>1,2,3</sup>, Keisuke Ishihara<sup>4</sup>, Gréta Martina Szücs<sup>1,2</sup>, Shotaro Otsuka<sup>1,2</sup>

<sup>1</sup>Max Perutz Labs, Vienna Biocenter Campus (VBC), Vienna, Austria, <sup>2</sup>Medical University of Vienna, Center for Medical Biochemistry, Vienna, Austria, <sup>3</sup>Vienna BioCenter PhD Program, Doctoral School of the University of Vienna and Medical University of Vienna, Vienna, Austria, <sup>4</sup>Department of Computational and Systems Biology, School of Medicine, University of Pittsburgh, Pittsburgh, PA, USA

## S4-3 From Transcription to Translation: Single Molecule Imaging of Endogenous Gene Activity

Timothy Stasevich, Matthew Saxton, Tatsuya Morisaki, O'Neil Wiggan  
Department of Biochemistry and Molecular Biology, Colorado State University, Fort Collins, CO, USA

## S4-4 Label-free correlative imaging reveals the heterogeneity of tumor microenvironments

Guan-Yu Zhuo, Wei-Hsun Wang, Ming-Chi Chen  
Institute of Translational Medicine and New Drug Development, China Medical University, Taiwan

## S4-5 Live CLEM imaging for studies of nuclear envelope dynamics

Tokuko Haraguchi  
Graduate School of Frontier Biosciences, Osaka University

### Symposium 5

Room E

#### 14:30-16:50 Theoretical Biology of Complex Systems

Chairs  
Mikhail Tikhonov (Physics, Washington University)  
Masayo Inoue (Graduate School of Engineering, Kyushu Institute of Technology)  
Chikara Furusawa (Center for Biosystems Dynamics Research, RIKEN)

## S5-1 Emergent simplicity in microbial ecosystems

Mikhail Tikhonov  
Washington University in St Louis, St Louis, MO, USA

## S5-2 The origin of non-equilibrium order

Arvind Murugan  
University of Chicago



**Monday, June 24**

- S5-3**      **Impact of population spatial structure on mutant fixation, from models on graphs to the gut**  
Anne-Florence Bitbol  
EPFL
- S5-4**      **Revealing global stoichiometry conservation architecture in cells by Raman and gene expression correspondences**  
Ken-ichiro F. Kamei<sup>1</sup>, Koseki Kobayashi-Kirschvink<sup>2,3</sup>, Takashi Nozoe<sup>1</sup>, Hidenori Nakaoka<sup>4</sup>, Miki Umetani<sup>1</sup>, Yuichi Wakamoto<sup>1</sup>  
<sup>1</sup>The University of Tokyo, <sup>2</sup>Broad Institute of MIT and Harvard, <sup>3</sup>Massachusetts Institute of Technology, <sup>4</sup>Kyoto University
- S5-5**      **Stability and death of in silico Escherichia coli metabolism**  
Yusuke Himeoka<sup>1</sup>, Chikara Furusawa<sup>1,2</sup>  
<sup>1</sup>Universal biology institute, The University of Tokyo, <sup>2</sup>Center for Biosystems Dynamics Research, RIKEN

**Hands-on Training Session D****Room C-2**

14:30-16:50      **DNA Nanomachine Tutorial**  
Chair              Shin-ichiro Nomura (Tohoku University)

- HT-D-1**      **DNA origami-based integrated molecular systems and functional nanomachines**  
Masayuki Endo<sup>1,2</sup>  
<sup>1</sup>Research Development Division, Kansai University, <sup>2</sup>WPI-iCeMS, Kyoto University
- HT-D-2**      **Nanomechanical DNA Origami Devices**  
Akinori Kuzuya  
Department of Chemistry and Materials Engineering, Kansai University
- HT-D-3**      **Multi-reconfigurable and multi-responsive DNA origami nanodevices**  
Yuki Suzuki  
Mie University
- HT-D-4**      **Online user interface of computational tools for accelerating DNA nanotechnology research**  
Ibuki Kawamata  
Kyoto University

# Oral Sessions

---

---

**HT-D-5**      **Long DNA strands' insertion into DNA droplets as a potential model for chromatin condensates studies**

Nathan Nunes Evangelista<sup>1</sup>, Chimura Takahiko<sup>2</sup>, Koki Kamiya<sup>3</sup>, Masahiro Takinoue<sup>1,2</sup>

<sup>1</sup>Department of Life Science and Technology, Tokyo Institute of Technology,

<sup>2</sup>Department of Computer Science, Tokyo Institute of Technology, <sup>3</sup>Division of Molecular Science, Graduate School of Science and Technology, Gunma University

**HT-D-6**      **DNA nanopore sensor for cell secretion measurement**

Hiromu Akai, Kan Shoji

Nagaoka University of Technology

**The Avanti Prize Lecture**

**Room A**

17:00-17:40      **From color-tuning to optogenetics: modeling the relationship between red-light absorption and fluorescence intensity in archaerhodopsins**

Chairs      Manuel Prieto (iBB/IST-Institute for Bioengineering and Bioscience, University of Lisbon, Portugal)  
Anthony Watts (University of Oxford, UK)

**AP**      **From color-tuning to optogenetics: modeling the relationship between red-light absorption and fluorescence intensity in archaerhodopsins**

Massimo Olivucci<sup>1,2</sup>

<sup>1</sup>Department of Biotechnology, Chemistry and Pharmacy, University of Siena, Siena, Italy, <sup>2</sup>Department of Chemistry, Bowling Green State University, Bowling Green, OH, USA

# Tuesday, June 25

Keynote 1		Room B-1
9:00-9:50	<b>Searching for Universal Laws in Evolved and Evolvable Complex Biological Systems</b>	
Chair	Chun-Biu Li (Stockholm University)	

- KL-1**      **Searching for Universal Laws in Evolved and Evolvable Complex Biological Systems**  
 Kunihiko Kaneko  
 Niels Bohr Institute

The 20th Early Career Award in Biophysics Candidate Presentations		Room A
10:00-12:20		
Chairs	Takayuki Nishizaka (Gakushuin University) Shuji Akiyama (Institute for Molecular Science)	

- YF-1**      **Microtubule/kinesin complexes spontaneously emerge vortices in cell-sized droplet generated by water/water phase separation**  
Hiroki Sakuta<sup>1,2</sup>, Naoki Nakatani<sup>3</sup>, Takayuki Torisawa<sup>4</sup>, Yutaka Sumino<sup>5</sup>, Kanta Tsumoto<sup>6</sup>, Kazuhiro Oiwa<sup>7,8</sup>, Kenichi Yoshikawa<sup>3</sup>  
<sup>1</sup>Universal Biology Institute, University of Tokyo, <sup>2</sup>Graduate School of Arts and Sciences, University of Tokyo, <sup>3</sup>Faculty of Life and Medical Sciences, Doshisha University, <sup>4</sup>Cell Architecture Laboratory, National Institute of Genetics, <sup>5</sup>Department of Applied Physics, Faculty of Advanced Engineering Tokyo University of Science, <sup>6</sup>Graduate School of Engineering, Mie University, <sup>7</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, <sup>8</sup>Graduate School of Science, University of Hyogo

- YF-2**      **Oxygen-evolving photosystem II structures during S1-S2-S3 transitions**  
Hongjie Li, Yoshiki Nakajima, Michihiro Suga, Jian-Ren Shen  
 Research Institute for Interdisciplinary Science and Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan

- YF-3**      **A high-throughput analysis of cancer-cell dormancy under mechanical confinement with micro-hydrogel beads**  
Misa Minegishi<sup>1,2</sup>, Keiji Nozaki<sup>2,3</sup>, Kaori Nishikawa<sup>1</sup>, Hirofumi Shintaku<sup>1,2,3</sup>  
<sup>1</sup>RIKEN Cluster for Pioneering Research, RIKEN., <sup>2</sup>Institute for Life and Medical Science, Kyoto University., <sup>3</sup>Department of Micro Engineering, Graduate School of Engineering, Kyoto University.

# Oral Sessions

---

---

- YF-4**      **Crosstalk of two bacterial actins composed of the force generation unit of *Spiroplasma* swimming**  
Daichi Takahashi<sup>1,2</sup>, Makoto Miyata<sup>2,3</sup>, Ikuko Fujiwara<sup>4</sup>  
<sup>1</sup>Research Institute for Interdisciplinary Science, Okayama University, Japan, <sup>2</sup>Graduate School of Science, Osaka Metropolitan University, Japan, <sup>3</sup>The OMU Advanced Research Institute for Natural Science and Technology, Osaka Metropolitan University, Japan, <sup>4</sup>Department of Materials Sciences and Bioengineering, Nagaoka University of Technology, Japan
- YF-5**      **Spatiotemporal formation of a single liquid-like condensate of  $\alpha$ -synuclein and subsequent aging by optical trapping**  
Keisuke Yuzu<sup>1,2</sup>, Ching-Yang Lin<sup>2</sup>, Po-Wei Yi<sup>2</sup>, Chih-Hao Huang<sup>2</sup>, Hiroshi Masuhara<sup>2</sup>, Eri Chatani<sup>1</sup>  
<sup>1</sup>Graduate School of Science, Kobe University, Kobe, Japan, <sup>2</sup>Department of Applied Chemistry, National Yang Ming Chiao Tung University, Hsinchu, Taiwan
- YF-6**      **Encapsulation of cell nucleolus by single-stranded DNA**  
Koichiro Maki<sup>1,2,3,4</sup>, Jumpei Fukute<sup>1,3</sup>, Taiji Adachi<sup>1,2,3,4</sup>  
<sup>1</sup>Laboratory of Biomechanics, Institute for Life and Medical Sciences, Kyoto University, Japan, <sup>2</sup>Department of Micro Engineering, Graduate School of Engineering, Kyoto University, Japan, <sup>3</sup>Department of Mammalian Regulatory Network, Graduate School of Biostudies, Kyoto University, Japan, <sup>4</sup>Department of Medicine and Medical Science, Graduate School of Medicine, Kyoto University, Japan
- YF-7**      **From cellular chirality to large-scale chirality: Emergence of chiral spiral in migrating cellular system**  
Masayuki Hayakawa<sup>1</sup>, Biplab Bhattacharjee<sup>1</sup>, Lihao Guo<sup>1</sup>, Hidekazu Kuwayama<sup>2</sup>, Tatsuo Shibata<sup>1</sup>  
<sup>1</sup>Laboratory for Physical Biology, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, <sup>2</sup>Faculty of Life and Environmental Sciences, University of Tsukuba, Tsukuba, Japan
- YF-8**      **Myosin and tropomyosin-troponin complementarily regulate thermal activation of striated muscles**  
Shuya Ishii<sup>1,2</sup>, Kotaro Oyama<sup>1,2</sup>, Fuyu Kobirumaki-Shimozawa<sup>2</sup>, Tomohiro Nakanishi<sup>2,3</sup>, Naoya Nakahara<sup>4</sup>, Madoka Suzuki<sup>5</sup>, Shin'ichi Ishiwata<sup>6</sup>, Norio Fukuda<sup>2</sup>  
<sup>1</sup>QST, Gunma, Japan, <sup>2</sup>Dept Cell Physiol, Sch Med, Jikei Univ, Tokyo, Japan, <sup>3</sup>Dept Anesthesiology, Sch Med, Jikei Univ, Tokyo, Japan, <sup>4</sup>Dept Mol Physiol, Sch Med, Jikei Univ, Tokyo, Japan, <sup>5</sup>IPR, Osaka Univ, Osaka, Japan, <sup>6</sup>Fac Sci Engrn, Waseda Univ, Tokyo, Japan

## Tuesday, June 25

**YF-9**      **Prediction of detailed structures over the entire free energy landscape of protein folding using extended statistical mechanical models and restrained simulations**

Koji Ooka<sup>1</sup>, Munehito Arai<sup>1,2,3</sup>

<sup>1</sup>College of Arts and Sciences, The University of Tokyo, Tokyo, Japan., <sup>2</sup>Department of Life Sciences, The University of Tokyo, Tokyo, Japan., <sup>3</sup>Department of Physics, The University of Tokyo, Tokyo, Japan.

**YF-10**      **Pseudo-luciferase activity of the SARS-CoV-2 spike protein**

Ryo Nishihara<sup>1,2</sup>, Hisham M Dokainish<sup>3,4</sup>, Yoshiki Kihara<sup>1,5</sup>, Yuji Sugita<sup>4,6,7</sup>, Ryoji Kurita<sup>1,5</sup>

<sup>1</sup>Health and Medical Research Institute, National Institute of Advanced Industrial Science and Technology, <sup>2</sup>Japan Science and Technology Agency, PRESTO, <sup>3</sup>Faculty of Pharmaceutical Sciences, Hokkaido University, <sup>4</sup>Theoretical Molecular Science Laboratory, RIKEN Cluster for Pioneering Research, <sup>5</sup>Faculty of Pure and Applied Sciences, University of Tsukuba, <sup>6</sup>Laboratory for Biomolecular Function Simulation, RIKEN Center for Biosystems Dynamics Research, <sup>7</sup>Computational Biophysics Research Team, RIKEN Center for Computational Science

### Symposium 6

Room B-1

10:00-12:20

**Mechanosensing and Mechanobiology, Biological Temperature**

Chairs

Mitsuhiro Iwaki (Protein Biophysics Group, Bio-ICT Lab, National Institute of Information and Communications Technology)

Kate Poole (Faculty of Medicine & Health, School of Biomedical Sciences, University of New South Wales)

**S6-1**      **Mammalian mechanosensing via ion channels**

Kate Poole, Abie Cargando, Phoebe Dunbabin, Lioba Schroeter, Amrutha Patkunarajah

School of Biomedical Sciences, Faculty of Medicine and Health, University of New South Wales, Sydney, Australia

**S6-2**      **Visualization and Control of Biological Temperature Using Subcellular-Targeted Chemical Dyes**

Satoshi Arai

WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University

**S6-3**      **Mechanotransduction at cell-cell junctions: beyond the usual suspects**

Alexander Dunn

Stanford University

# Oral Sessions

- S6-4**      **DNA nanodevices for single-molecule biology in mechanosystems**  
 Mitsuhiro Iwaki<sup>1,2,3</sup>  
<sup>1</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, <sup>2</sup>RIKEN Center for Biosystems Dynamics Research, <sup>3</sup>Immunology Frontier Research Center, Osaka University
- S6-5**      **A high-throughput analysis of cancer-cell dormancy under mechanical confinement with micro-hydrogel beads**  
 Misa Minegishi<sup>1,2</sup>, Keiji Nozaki<sup>2,3</sup>, Kaori Nishikawa<sup>1</sup>, Hirofumi Shintaku<sup>1,2,3</sup>  
<sup>1</sup>RIKEN Cluster for Pioneering Research, RIKEN., <sup>2</sup>Institute for Life and Medical Science, Kyoto University., <sup>3</sup>Department of Micro Engineering, Graduate School of Engineering, Kyoto University.
- S6-6**      **Platelet migration behavior is dependent on substrate stiffness**  
 Hendrik von Eysmond, Jan Seifert, Johannes Rheinlaender, Tilman E. Schäffer  
 Institute of Applied Physics, University of Tübingen, Germany

## Symposium 7

Room B-2

10:00-12:20

### Protein Structure to Function 1

Chairs

Ho Min Kim (Korea Advanced Institute of Science and Technology)

Mikako Shirouzu (Center for Biosystems Dynamics Research, RIKEN)

- S7-1**      **Structural dynamics of parathyroid hormone receptor and development of biased agonist**  
 Osamu Nureki, Kazuhiro Kobayashi  
 The University of Tokyo, Tokyo, Japan
- S7-2**      **Structure and Function of TMEM87A, a unique Voltage-dependent Cation Channel in Golgi apparatus**  
 Ho Min Kim  
 KAIST
- S7-3**      **Structural basis for antiepileptic drugs and botulinum neurotoxin recognition of SV2A**  
 Atsushi Yamagata  
 RIKEN Center for Biosystems Dynamics Research

**Tuesday, June 25**

- S7-4**      **Multi-dimensional crystallography: how do enzymes work?**  
 Pedram Mehrabi<sup>1</sup>, Eike Schulz<sup>4</sup>, Sihyun Sung<sup>3</sup>, David von Stetten<sup>3</sup>,  
 Caitlin Hatton<sup>1</sup>, Stephan Kleine-Doepke<sup>1</sup>, Jan-Philipp Leimkohl<sup>2</sup>,  
 Hendrik Schikora<sup>2</sup>, Martin Kollwe<sup>2</sup>, Friedjof Tellkamp<sup>2</sup>  
<sup>1</sup>Institute for Nanostructure and Solid State Physics, University of Hamburg, Hamburg,  
 Germany., <sup>2</sup>Max-Planck-Institute for the Structure and Dynamics of Matter, Hamburg,  
 Germany., <sup>3</sup>EMBL-Hamburg, <sup>4</sup>University Medical Center Hamburg-Eppendorf (UKE),  
 Hamburg, Germany
- S7-5**      **SAM lyases – small, divergent and multifunctional proteins in  
bacteriophage counter defense**  
 Maria Selmer  
 Department of Cell and Molecular Biology, Uppsala University, Sweden
- S7-6**      **Unraveling the Energy Transition Network That Dictates Allosteric  
Activation of Proapoptotic High-Temperature Requirement Protease  
A2**  
 Kakoli Bose<sup>1</sup>, Aasna Parui<sup>1</sup>, Vandana Mishra<sup>2</sup>, Shubhankar Dutta<sup>1</sup>,  
 Prasenjit Bhaumik<sup>2</sup>  
<sup>1</sup>Bose Lab, ACTREC Tata Memorial Centre, NAVI MUMBAI, India; Homi Bhabha  
 National Institute, Mumbai, India, <sup>2</sup>Department of Biosciences and Bioengineering,  
 Indian Institute of Technology Bombay, India

**Symposium 8****Room C-2**

10:00-12:20

**Unstructured/Disordered Proteins, RNA**

Chair

Shintaro Iwasaki (Cluster for Pioneering Research, RIKEN)

- S8-1**      **DEAD-box ATPases are global regulators of phase-separated  
organelles and RNA flux**  
 Maria Hondele  
 Biozentrum, University of Basel, Spitalstrasse 41, 4056 Basel, Switzerland
- S8-2**      **Engineering phase separations in cells to manipulate RNA  
condensates**  
 Zoher Gueroui  
 Ecole Normale Supérieure

# Oral Sessions

## S8-3 Transcriptomics in P-bodies reveals the selective mRNA release to modulate translation

Yuichi Shichino<sup>1</sup>, Mari Mito<sup>1</sup>, Shintaro Iwasaki<sup>1,2</sup>

<sup>1</sup>RIKEN CPR, <sup>2</sup>Dept. Comp. Biol. Med. Sci., Grad. Sch, Front. Sci., Univ. Tokyo

## S8-4 Stress Granule Fusion Mediated by Mitochondrial Dynamics Is Essential for Cell Survival

Tae Lim Park, Won-Ki Cho

Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), Daejeon 34141, Republic of Korea

## S8-5 Amyloid conformation-dependent disaggregation revealed by single-molecule fluorescence imaging

Yoshiko Nakagawa<sup>1,2</sup>, Howard C.H. Chen<sup>1</sup>, Yusuke Komi<sup>1</sup>,

Shinju Sugiyama<sup>1</sup>, Takaaki Kurinomaru<sup>3</sup>, Yuri Tomabechi<sup>4</sup>,

Elena Krayukhina<sup>3</sup>, Kenji Okamoto<sup>5</sup>, Takeshi Yokoyama<sup>4</sup>, Mikako Shirouzu<sup>4</sup>,

Susumu Uchiyama<sup>3,6</sup>, Megumi Inaba<sup>2</sup>, Tatsuya Niwa<sup>7</sup>, Yasushi Sako<sup>5</sup>,

Takahiro Nakayama<sup>8</sup>, Hiroki Konno<sup>8</sup>, Noriyuki Kodera<sup>8</sup>, Hideki Taguchi<sup>7</sup>,

Motomasa Tanaka<sup>1</sup>

<sup>1</sup>RIKEN Center for Brain Science, Saitama, Japan, <sup>2</sup>School of Life Science and Technology, Tokyo Institute of Technology, Kanagawa, Japan, <sup>3</sup>Research Department, U-Medico Inc., Osaka, Japan, <sup>4</sup>RIKEN Center for Biosystems Dynamics Research, Kanagawa, Japan, <sup>5</sup>Cellular Informatics Laboratory, RIKEN, Saitama, Japan, <sup>6</sup>Graduate School of Engineering, Osaka University, Osaka, Japan, <sup>7</sup>Cell Biology Center, Institute of Innovative Research, Tokyo Institute of Technology, Kanagawa, Japan, <sup>8</sup>WPI Nano Life Science Institute, Kanazawa University

### Symposium 9

### Room D

#### 10:00-12:20 Lipid and Membrane Biophysics

Chairs

Chiho Watanabe (Graduate school of integrated sciences for life, Hiroshima University)

Roberto Covino (Frankfurt Institute for Advanced Studies)

#### S9-1 Exploring Lipid and Membrane Biophysics

Chiho Watanabe

Graduate School of Integrated Sciences for Life, Hiroshima University, Hiroshima, Japan



- S9-2**      **High-throughput analysis of membrane fluidity unveils a hidden dimension in immune cell states**  
 Luca Andronico<sup>1</sup>, Yidan Jiang<sup>1,2</sup>, Valentina Carannante<sup>3</sup>, Sofia Iskrak<sup>1</sup>, Patrick A. Sandoz<sup>3</sup>, Jaromir Mikes<sup>1</sup>, Andrey Klymchenko<sup>4</sup>, Marcus Buggert<sup>5</sup>, Anders Österborg<sup>6,7</sup>, Björn Önfelt<sup>3,5</sup>, Petter Brodin<sup>1</sup>, Erdinc Sezgin<sup>1</sup>  
<sup>1</sup>Science for Life Laboratory, Department of Women's and Children's Health, Karolinska Institutet, 17165 Solna, Sweden, <sup>2</sup>European Molecular Biology Laboratory (EMBL), 69117, Heidelberg, Germany, <sup>3</sup>Science for Life Laboratory, Department of Applied Physics, KTH Royal Institute of Technology, 114 28 Stockholm, Sweden, <sup>4</sup>Laboratoire de Bioimagerie et Pathologies, UMR 7021 CNRS, Université de Strasbourg 74 Route du Rhin 67401 Illkirch France, <sup>5</sup>Department of Medicine Huddinge, Centre for Infectious Medicine, Karolinska Institutet, 171 77, Stockholm, Sweden, <sup>6</sup>Department of Hematology, Karolinska University Hospital, Stockholm, Sweden, <sup>7</sup>Department of Oncology-Pathology, Karolinska Institutet, 171 77, Stockholm, Sweden
- S9-3**      **Biological tuning of the membrane phase transition facilitates plasma membrane organization and function.**  
 Sarah Veatch  
 University of Michigan
- S9-4**      **Lipid heterogeneity within giant vesicles confer robust protein pattern formation**  
 Nishu Kanwa  
 Max Planck Institute for Biochemistry, Germany
- S9-5**      **Electron diffraction reveals substructures in lipid raft-like ordered membrane domains**  
 Masanao Kinoshita, Mayu Maeda, Shimpei Yamaguchi, Nobuaki Matsumori  
 Kyushu University
- S9-6**      **Elastic and viscous properties of model lipid bilayers measured using dynamic neutron scattering**  
 Michihiro Nagao<sup>1,2,3</sup>  
<sup>1</sup>National Institute of Standards and Technology Center for Neutron Research, <sup>2</sup>Department of Materials Science and Engineering, University of Maryland, <sup>3</sup>Department of Physics and Astronomy, University of Delaware

# Oral Sessions

**S9-7**      **Investigating how membranes control the thermodynamics and kinetics of membrane protein complexes with molecular simulations.**

Roberto Covino

Frankfurt Institute for Advanced Studies, Ruth-Moufang-Straße 1, 60438 Frankfurt am Main, Germany.

## Symposium 10

Room E

10:00-12:20

### Data Science for Integrated Dynamic Structural Biology

Chairs

Florence Tama (Nagoya University & RIKEN Center for Computational Science)

Jianhan Chen (Chemistry, University of Massachusetts Amherst)

**S10-1**      **Solving 3D puzzles of biomolecular interactions by integrative modelling**

Alexandre Bonvin

Utrecht University, Faculty of Science, Bijvoet Centre

**S10-2**      **Searching the Molecular Space using Neural Network Energy Models**

Chaok Seok

Seoul National University

**S10-3**      **Dynamic structure of monomeric Grb2 revealed via integrative modeling**

Mao Oide<sup>1</sup>, Teppei Ikeya<sup>2</sup>, Weitong Ren<sup>3</sup>, Hisham Dokainish<sup>4</sup>, Takaharu Mori<sup>5</sup>, Yutaka Ito<sup>2</sup>, Yuji Sugita<sup>1,6,7</sup>

<sup>1</sup>Theoretical Molecular Science Laboratory, RIKEN Clusters for Pioneering Research, Saitama, Japan, <sup>2</sup>Department of Chemistry, Graduate School of Science, Tokyo Metropolitan University, Tokyo, Japan, <sup>3</sup>Wenzhou Institute, University of Chinese Academy of Sciences, Zhejiang, China, <sup>4</sup>Laboratory of Biomolecular Science, Faculty of Pharmaceutical Sciences, Hokkaido University, Hokkaido, Japan, <sup>5</sup>Department of Chemistry, Faculty of Science Division I, Tokyo University of Science, Tokyo, Japan, <sup>6</sup>Laboratory for Biomolecular Function Simulation, RIKEN Center for Biosystems Dynamics Research, Hyogo, Japan, <sup>7</sup>Computational Biophysics Research Team, RIKEN Center for Computational Science, Hyogo, Japan

**S10-4**      **Dynamics of Intrinsically Disordered Proteins via Simulations and Machine Learning**

Michael Feig

Michigan State University, East Lansing, MI, USA

**Tuesday, June 25****S10-5 Protein structural ensembles from 3D and 2D cryo-EM data**

Massimiliano Bonomi

Institut Pasteur, Université Paris Cité, CNRS UMR 3528, Computational Structural Biology Unit, Paris, France

**Symposium 11****Room A****16:00-18:20 Single Molecule Biophysics in Chromosome Science**

Chairs

Kayo Hibino (Department of Chromosome Science, National Institute of Genetics)  
Je-Kyung Ryu (Seoul National University)**S11-1 Single-nucleosome imaging unveils dynamic organization of mitotic chromosomes.**Kayo Hibino<sup>1,2</sup>, Yuji Sakai<sup>3</sup>, Sachiko Tamura<sup>1</sup>, Masatoshi Takagi<sup>4</sup>,  
Katsuhiko Minami<sup>1,2</sup>, Toyooki Natsume<sup>1,2,6</sup>, Masa A. Shimazoe<sup>1,2</sup>,  
Masato T. Kanemaki<sup>1,2,5</sup>, Naoko Imamoto<sup>4</sup>, Kazuhiro Maeshima<sup>1,2</sup><sup>1</sup>National Institute of Genetics, Mishima, Japan, <sup>2</sup>SOKENDAI, Mishima, Japan,  
<sup>3</sup>Kyoto University, Kyoto, Japan, <sup>4</sup>RIKEN Cluster for Pioneering Research, Wako,  
Japan, <sup>5</sup>The University of Tokyo, Tokyo, Japan, <sup>6</sup>Present address: Research Center  
for Genome & Medical Sciences, Tokyo**S11-2 Mechanics and microrheology of native human mitotic chromosomes**

Gijs JL Wuite

Vrije Universiteit, De Boelelaan 1081, 1081 HV, Amsterdam, The Netherlands

**S11-3 Unpaused and Loosened Unwinding of Nucleosomal DNA on H2A.B Variants**Hikaru Nozawa<sup>1</sup>, Fritz Nagae<sup>2</sup>, Satoshi Ogihara<sup>1</sup>, Rina Hirano<sup>3</sup>,  
Hirohito Yamazaki<sup>4</sup>, Ryo Iizuka<sup>1</sup>, Munetaka Akatsu<sup>3</sup>, Tomoya Kujirai<sup>3</sup>,  
Shoji Takada<sup>2</sup>, Hitoshi Kurumizaka<sup>3</sup>, Sotaro Uemura<sup>1</sup><sup>1</sup>Department of Biological Sciences, Graduate School of Science, The University of  
Tokyo, Tokyo, Japan, <sup>2</sup>Department of Biophysics, Graduate School of Science, Kyoto  
University, Kyoto, Japan, <sup>3</sup>Institute for Quantitative Biosciences, The University of  
Tokyo, Tokyo, Japan, <sup>4</sup>Department of Mechanical Engineering, Nagaoka University of  
Technology, Niigata, Japan**S11-4 Super-resolution imaging of transcription in living cells**

Ibrahim Cissé

Department of Biological Physics Max Planck Institute of Immunobiology and  
Epigenetics

# Oral Sessions

- S11-5**      **Bridging-induced phase separation by cohesin complexes**  
 Je-Kyung Ryu  
 Department of physics and astronomy, Seoul National University, South Korea

## Symposium 12

Room B-1

### 16:00-18:20      **Cell Motility, Cytoskeleton and Motor Proteins**

Chairs      Sarah Köster (Faculty of Physics / Institute for X-Ray Physics, University of Goettingen)  
 Ikuko Fujiwara (Dep. of Materials Science and Bioengineering, Nagaoka University of Technology)

**S12-1**      **Inhibitory mechanisms of actin polymerization dynamics at the molecular level by Cytochalasin D and Archea gelsolin**

Ikuko Fujiwara<sup>1</sup>, Takahiro Mitani<sup>1</sup>, Horyo Mizuki<sup>1</sup>, Toshiro Oda<sup>2</sup>,  
 Shuichi Takeda<sup>3</sup>

<sup>1</sup>Material Sciences and Bioengineering, Nagaoka University of Technology, Japan,

<sup>2</sup>Faculty of Health and Welfare, Tokai Gakuin University, Kakamigahara, Japan,

<sup>3</sup>Okayama University, Okayama, Japan

**S12-2**      **COLLECTIVE MOTOR AND MICROTUBULE MECHANICS UNDERLYING SPINDLE SELF-ORGANIZATION**

Yuta Shimamoto<sup>1,2</sup>

<sup>1</sup>National Institute of Genetics, <sup>2</sup>SOKENDAI University

**S12-3**      **Intermediate filaments in the cytoskeleton: safety belt and shock absorber for the cell?**

Sarah Köster

University of Göttingen, Germany

**S12-4**      **Intra- and extra-cellular functions of vimentin: mechanics, signaling, and adhesion**

Paul Janmey<sup>1</sup>, Robert Bucki<sup>1</sup>, Alison Patteson<sup>2</sup>

<sup>1</sup>Department of Physiology, University of Pennsylvania, Philadelphia PA, USA,

<sup>2</sup>Physics Department, Syracuse University, Syracuse NY, USA

**S12-5**      **Cell biophysics: phase diagrams, phase portraits and trajectories**

Cécile Sykes

Laboratoire de Physique de l'École normale supérieure, ENS, Université PSL, CNRS, Sorbonne Université, Université Paris Cité, F-75005 Paris, France

**Symposium 13****Room B-2**

16:00-18:20

**Protein Structure to Function 2**

Chairs

Shun-ichi Sekine (RIKEN)

Heeyoun Bunch (Applied Biosciences, Kyungpook National University)

**S13-1****Structural basis of promoter-proximal pausing of RNA polymerase II at +1 nucleosome**

Shun-ichi Sekine

RIKEN Center for Biosystems Dynamics Research, Yokohama, Japan

**S13-2****Coarse-grained molecular dynamics simulations of parental histone H3/H4 recycling by a replisome**Fritz Nagae<sup>1</sup>, Yasuto Murayama<sup>2</sup>, Tsuyoshi Terakawa<sup>1</sup><sup>1</sup>Department of Biophysics, Graduate School of Science, Kyoto University Kyoto, Japan, <sup>2</sup>Department of Chromosome Science, National Institute of Genetics, Shizuoka, Japan**S13-3****Structural and biochemical analysis of a unique structural unit of chromatin**Kayo Nozawa<sup>1</sup>, Hitoshi Kurumizaka<sup>2</sup><sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, <sup>2</sup>Institute for Quantitative Biosciences, The University of Tokyo**S13-4****A dual interaction between RSV NS1 protein and MED25 underlies RSV virulence and interferon antagonism**Celia Ait-Mouhoub<sup>2</sup>, Jiawei Dong<sup>1</sup>, Alexis Verger<sup>3</sup>, Marie Galloux<sup>2</sup>, Delphyne Descamps<sup>2</sup>, Jean-Francois Eleouet<sup>2</sup>, Monika Bajorek<sup>2</sup>, Christina Sizun<sup>1</sup><sup>1</sup>Institut de Chimie des Substances Naturelles, CNRS, Université Paris-Saclay, Gif-sur-Yvette, France, <sup>2</sup>Virologie et Immunologie Moléculaires, INRAE, Université Paris-Saclay, UVSQ, Jouy-en-Josas, France,, <sup>3</sup>Integrative Structural Biology, CNRS, INSERM, Université de Lille, Institut Pasteur de Lille, Lille, France

# Oral Sessions

## **S13-5** ERK2-topoisomerase II regulatory axis is important for gene activation in immediate early genes

Heeyoun Bunch<sup>1,2</sup>, Deukyeong Kim<sup>2</sup>, Masahiro Naganuma<sup>3</sup>, Reiko Nakagawa<sup>4</sup>, Anh Cong<sup>5</sup>, Jaehyeon Jeong<sup>1</sup>, Haruhiko Ehara<sup>3</sup>, Hongha Vu<sup>6</sup>, Jeong Ho Chang<sup>6</sup>, Matthew Schellenberg<sup>5</sup>, Shun-ichi Sekine<sup>3</sup>  
<sup>1</sup>Department of Applied Biosciences, Kyungpook National University, Daegu, Republic of Korea, <sup>2</sup>School of Applied Biosciences, College of Agriculture & Life Sciences, Kyungpook National University, Daegu, Republic of Korea, <sup>3</sup>Laboratory for Transcription Structural Biology, RIKEN Center for Biosystems Dynamics Research, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Japan, <sup>4</sup>RIKEN BDR Laboratory for Phyloinformatics, Hyogo, Japan, <sup>5</sup>Department of Biochemistry and Molecular Biology, Mayo Clinic, Rochester, Minnesota, USA, <sup>6</sup>Department of Biology Education, Kyungpook National University, Daegu, Republic of Korea

## **S13-6** Topological formation of transcriptional condensates relative to subnuclear compartments

Won-Ki Cho  
 Korea Advanced Institute of Science and Technology (KAIST)

## **S13-7** Spatial regulation of ribosomal RNA transcription by phase separation and transition

Satoru Ide<sup>1,2</sup>, Yasuto Murayama<sup>1,2</sup>, Kazuhiro Maeshima<sup>1,2</sup>  
<sup>1</sup>National Institute of Genetics, Shizuoka, Japan, <sup>2</sup>SOKENDAI (the Graduate University for Advanced Studies), Japan

### Symposium 14

Room E

16:00-18:20 **Data Science, Machine Learning, and Analytical Frameworks for Understanding the Heterogeneity of Cellular and Multicellular Systems**

Chairs: Susanne Rafelski (Allen Institute for Cell Science)  
 Katsuyuki Shiroguchi (Center for Biosystems Dynamics Research (BDR), RIKEN)

## **S14-1** Integrated intracellular organization dynamics and its variations in human iPS cells

Allen Institute for Cell Science<sup>1</sup>, Julie A Theriot<sup>2</sup>, Susanne Rafelski<sup>1</sup>  
<sup>1</sup>Allen Institute for Cell Science Seattle, WA, USA, <sup>2</sup>Department of Biology and Howard Hughes Medical Institute, University of Washington Seattle, WA USA

**Tuesday, June 25**

- S14-2**      **Machine learning interpretable models of cell mechanics and morphogenesis**  
Vincenzo Vitelli  
University of Chicago, Chicago, USA
- S14-3**      **Enhancing Identification of Cancer Stem Cells through Line Illumination Raman Microscopy and Hydrogel-Based Platforms**  
Jean-Emmanuel Clement  
Hokkaido University WPI-ICReDD
- S14-4**      **Cellular gradient flow structure connects single-cell-level rules and population-level dynamics**  
[Shuhei Horiguchi](#)<sup>1,2</sup>, Tetsuya Kobayashi<sup>2</sup>  
<sup>1</sup>Kanazawa University, <sup>2</sup>The University of Tokyo
- S14-5**      **Imaged-based prediction of single-cell transcriptomic phenotypes using robotic data acquisition**  
Katsuyuki Shiroguchi  
RIKEN Center for Biosystems Dynamics Research (BDR), Japan
- S14-6**      **Machine learning for Overcoming Heterogeneity of Single-cell Datasets**  
Maria Brbic  
EPFL

**Hands-on Training Session A****Room C-2**

16:00-18:20      **Millions of Single Live Cell Analysis with the Automated Trans-scale-scope, AMATERAS**

Chairs              Shuichi Onami (RIKEN Center for Biosystems Dynamics Research)  
Takeharu Nagai (Osaka University)

- HT-A-1**      **Automated trans-scale scope opens up a new horizon in life science research**  
Takeharu Nagai<sup>1,2,3</sup>  
<sup>1</sup>SANKEN, Osaka University, <sup>2</sup>OTRI, Osaka University, <sup>3</sup>RIES, Osaka University
- HT-A-2**      **Activatable Raman probes for multiplexed vibrational imaging in live cells and tissues**  
Mako Kamiya  
Department of Life Science and Technology, Tokyo Institute of Technology

# Oral Sessions

---

**HT-A-3**      **Engineering high performance biosensors to analyze signaling and metabolism in live cells**

Robert E. Campbell

Department of Chemistry, School of Science, The University of Tokyo

**HT-A-4**      **Analyzing the Invisible: Advanced Techniques in Microscopy and Spectroscopy for Internal State Characterization**

Imari Sato

National Institute of Informatics

**HT-A-5**      **Cell Tracking and Data Management for AMATERAS**

Shuichi Onami<sup>1,2,3</sup>

<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, <sup>2</sup>RIKEN Information R&D and Strategy Headquarters, Kobe, Japan, <sup>3</sup>RIKEN, TRIP Headquarters, Kobe, Japan



**Wednesday, June 26**

<b>Plenary IUPAB Engstrom Lecture</b>		<b>Room A</b>
9:00-9:50	<b>Filming Biomolecules in Dynamic Action by High-speed AFM</b>	
Chair	Christina Sizun (CNRS/ICSN, Université Paris Saclay)	

- PL-2** **Filming biomolecules in dynamic action by high-speed AFM**  
 Toshio Ando  
 Nano Life Science Institute (WPI-NanoLSI), Kanazawa University

<b>Symposium 15</b>		<b>Room A</b>
10:00-12:20	<b>Single Molecule Biophysics with Advanced Techniques</b>	
Chairs	Doory Kim (Department of Chemistry, Hanyang University) Masataka Yanagawa (Tohoku University)	

- S15-1** **Unveiling receptor dynamics with single-molecule high-content analysis**  
 Masataka Yanagawa<sup>1,2</sup>  
<sup>1</sup>Molecular and Cellular Biochemistry, Graduate School of Pharmaceutical Sciences, Tohoku University, Miyagi, Japan, <sup>2</sup>Cellular Informatics Laboratory, RIKEN Cluster for Pioneering Research, Saitama, Japan
- S15-2** **Multidimensional Super-Resolution Microscopy of the Living Cell**  
 Ke Xu  
 University of California, Berkeley
- S15-3** **Subcellular localization and diffusion dynamics of RNA degradosome proteins in live bacteria cells**  
 Sangjin Kim  
 University of Illinois at Urbana-Champaign
- S15-4** **mRNA decoding in human is kinetically and structurally distinct from bacteria.**  
 Scott C Blanchard<sup>1,2</sup>  
<sup>1</sup>Department of Structural Biology, St Jude Children's Research Hospital, Memphis, TN, USA, <sup>2</sup>Chemical Biology & Therapeutics, St Jude Children's Research Hospital, Memphis, TN, USA.
- S15-5** **Ultrastructural Studies of Gram-positive Bacteria and Their Extracellular Vesicles**  
 Doory Kim  
 Hanyang University

# Oral Sessions

## Symposium 16

Room B-1

10:00-12:20

### Rotary ATPases

Chairs

Tomoko Msaïke (Faculty of Science and Technology / Department of Applied Biological Science, Tokyo University of Science)

Alastair Stewart (Structural Biology, The Victor Chang Cardiac Research Institute)

#### S16-1

#### Mechanisms of rotary ATPases

Tomoko Msaïke

Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science

#### S16-2

#### E. coli ATP synthase after the addition of ATP or ADP

Alastair Stewart

The Victor Chang Cardiac Research Institute, Darlinghurst, Australia

#### S16-3

#### Inferring subsystem efficiencies in bipartite molecular machines

Matthew Leighton, [David Sivak](#)

Department of Physics, Simon Fraser University

#### S16-4

#### Biophysical characterization of the archaeellar motor rotation

[Yoshiaki Kinoshita](#), Rikiya Watanabe

RIKEN, Saitama, Japan

#### S16-5

#### Molecular Mechanism of V-ATPase Reversible Disassembly

Stephan Wilkens

SUNY Upstate Medical University, Department of Biochemistry and Molecular Biology, 750 East Adams Street, Syracuse, NY 13210, USA

#### S16-6

#### Sodium motive force-driven ATP synthesis by EhV-ATPase

[Akihiro Otomo](#)<sup>1,2</sup>, Lucy Zhu<sup>3</sup>, Mayuko Yamamoto<sup>1</sup>, Yasuko Okuni<sup>1</sup>, Takanori Harashima<sup>1,2</sup>, Ryota Iino<sup>1,2</sup>

<sup>1</sup>Institute for Molecular Science, <sup>2</sup>SOKENDAI, <sup>3</sup>ParisTech

**Wednesday, June 26****S16-7 Engineering of ATP synthase to enhance proton-to-ATP ratio**

Hiroshi Ueno<sup>1</sup>, Kiyoto Yasuda<sup>1</sup>, Norie Hamaguchi<sup>2</sup>, Riku Marui<sup>1</sup>,  
Naruhiko Adachi<sup>3</sup>, Toshio Moriya<sup>3</sup>, Satomi Inaba<sup>3</sup>, Toshiya Senda<sup>3</sup>,  
Takeshi Murata<sup>2</sup>, Hiroyuki Noji<sup>1</sup>

<sup>1</sup>Department of Applied Chemistry, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Department of Chemistry, Graduate School of Science, Chiba University, Chiba, Japan, <sup>3</sup>Structural Biology Research Center, Institute of Materials Structure Science, High Energy Accelerator Research Organization (KEK), Ibaraki, Japan

**Symposium 17****Room B-2****10:00-12:20 Protein Design & Engineering**

Chairs  
Guto Rhys (Chemistry, Cardiff University)  
Ai Niitsu (CPR, RIKEN)

**S17-1 EMBO Keynote Lecture****Modular protein design for new protein folds and regulation of protein and biological processes**

Roman Jerala  
National Institute of Chemistry, Ljubljana, Slovenia

**S17-2 Indels: The Evolutionary Switches Bridging Protein Functions and Topologies**

Paola Laurino  
Protein Engineering and Evolution Unit, Okinawa Inst. of Sci. & Tech. Graduate Univ.

**S17-3 How will we catalyse unnatural reactions using proteins?**

Guto Rhys  
Cardiff University, UK

**S17-4 Computational design of highly active SNARE-like membrane fusion proteins**

Masaharu Somiya<sup>1,2</sup>, Sydney Funk<sup>1</sup>, Neil King<sup>1</sup>  
<sup>1</sup>Institute for Protein Design, University of Washington, <sup>2</sup>SANKEN, Osaka University

**S17-5 Protein Structure Prediction and Design using RoseTTAFold**

Minkyung Baek  
Department of Biological Sciences, Seoul National University, Seoul, Republic of Korea

# Oral Sessions

## S17-6 Data Efficient Protein Function Improvement by Machine Learning with Molecular Simulation

[Teppei Deguchi](#)<sup>1,2</sup>, Yoichi Kurumida<sup>3</sup>, Shinji Iida<sup>3</sup>, Yutaka Saito<sup>1,2,3</sup>

<sup>1</sup>Graduate School of Frontier Sciences, The University of Tokyo, Chiba, Japan.,

<sup>2</sup>Artificial Intelligence Research Center, AIST, Tokyo, Japan., <sup>3</sup>Department of Data Science, School of Frontier Engineering, Kitasato University, Kanagawa, Japan.

### Symposium 18

Room C-2

#### 10:00-12:20 Neural Systems and Excitable Cells

Chairs  
Chie Hosokawa (Graduate School of Science / Department of Chemistry, Osaka Metropolitan University)  
Sung Hyun Kim (Department of Physiology, School of Medicine, Kyung Hee University)

## S18-1 A $\beta$ -MISFOLDING AS PRECISE RISK PLASMA BIOMARKER FOR ALZHEIMER DEMENTIA IN A SYMPTOM-FREE STAGE

Klaus Gerwert<sup>1,2</sup>

<sup>1</sup>Ruhr University Bochum, Bochum, Germany, <sup>2</sup>Center for Protein Diagnostics, Bochum, Germany

## S18-2 Harnessing thermoplasmonics to modulate neuronal excitability and network activity

Yoonkey Nam

Department of Bio and Brain Engineering, KAIST (Korea Advanced Institute of Science and Technology)

## S18-3 Distinct synaptic vesicle recycling in inhibitory nerve terminals is coordinated by SV2A

Sung Hyun Kim

Department of Physiology, School of Medicine, Kyung Hee University

## S18-4 Optical Manipulation of Molecular Dynamics in Neurons

Chie Hosokawa

Osaka Metropolitan University

## S18-5 Measuring the stiffness of neuronal growth cones with scanning ion conductance microscopy

[Aylin Balmes](#)<sup>1</sup>, Hannes Schmidt<sup>2</sup>, Tilman E. Schäffer<sup>1</sup>

<sup>1</sup>Institute of Applied Physics, University of Tübingen, Tübingen, Germany, <sup>2</sup>Interfaculty Institute of Biochemistry (IFIB), University of Tübingen, Tübingen, Germany

**Wednesday, June 26****S18-6 Optimal power-law encoding is self-organized in cultured neuronal networks**Asahi Nakamuta, Jun-nosuke Teramae

Grad Sch Informatics, Kyoto University, Kyoto, Japan

**Symposium 19****Room D**

10:00-12:20

**Understanding Structure and Function of Emerging Viruses**

Chairs

Juha Huiskonen (Institute of Biotechnology, Helsinki Institute of Life Science HiLIFE, University of Helsinki)

Katsumi Maenaka (Faculty of Pharmaceutical Sciences, Hokkaido University)

**S19-1****Functional annotation of viral protein sugarcoats**Shang-Te Danny Hsu<sup>1,2,3</sup><sup>1</sup>Institute of Biological Chemistry, Academia Sinica, Taipei 11529, Taiwan, <sup>2</sup>Institute of Biochemical Sciences, National Taiwan University, Taipei 106319, Taiwan,<sup>3</sup>International Institute for Sustainability with Knotted Chiral Meta Matter (SKCM2), Hiroshima University, Higashihiroshima, Hiroshima 739-8527, Japan**S19-2****Host Recognition of SARS-CoV-2 Spike: A Double-Edged Sword**Firdaus Samsudin<sup>1</sup>, Palur Raghuvamsi<sup>1,2</sup>, Lorena Zuzic<sup>1</sup>, Ganna Petruk<sup>3</sup>, Manoj Puthia<sup>3</sup>, Jitka Petrlova<sup>3</sup>, Paul MacAry<sup>4</sup>, Ganesh Anand<sup>5</sup>, Artur Schmidtchen<sup>6</sup>, Peter J. Bond<sup>1,2</sup><sup>1</sup>Bioinformatics Institute, A\*STAR, Singapore, <sup>2</sup>Dept. of Biological Sciences, NUS, Singapore, <sup>3</sup>Dept. of Clinical Sciences, Lund University, Sweden, <sup>4</sup>Life Sciences Institute, NUS, Singapore, <sup>5</sup>Dept. of Chemistry, The Pennsylvania State University, PA, USA, <sup>6</sup>Dept. of Biomedical Sciences, University of Copenhagen, Denmark**S19-3****Cryo-ET of SARS-CoV-2 provided insights into its architecture and neutralization**

Sai Li

School of Life Sciences, Tsinghua University, Beijing 100084, China

# Oral Sessions

## S19-4 Elucidating Spike Protein Conformations from Simulation and Experiment

Hisham M. Dokainish<sup>1,2</sup>, Yuji Sugita<sup>2,3,4</sup>, Katsumi Maenaka<sup>1,5,6</sup>

<sup>1</sup>Center for Research and Education on Drug Discovery, Faculty of Pharmaceutical Sciences, Hokkaido University, Sapporo, Japan, <sup>2</sup>Theoretical Molecular Science Laboratory, RIKEN Cluster for Pioneering Research, Wako, Japan, <sup>3</sup>Laboratory for Biomolecular Function Simulation, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, <sup>4</sup>Computational Biophysics Research Team, RIKEN Center for Computational Science, Kobe, Japan, <sup>5</sup>Hokkaido University Institute for Vaccine Research & Development, Sapporo, Japan, <sup>6</sup>International Institute for Zoonosis Control, Hokkaido University, Sapporo, Japan

## S19-5 Direct inhibition of human APOBEC3 deaminases by HIV-1 Vif independent of the ubiquitination/degradation pathway

Keisuke Kamba<sup>1</sup>, Li Wan<sup>1,2</sup>, Kentaro Tozawa<sup>1,2</sup>, Satoru Unzai<sup>3</sup>, Ryo Morishita<sup>4</sup>, Akifumi Takaori-Kondo<sup>5</sup>, Takashi Nagata<sup>1,2</sup>, Masato Katahira<sup>1,2</sup>

<sup>1</sup>Institute of Advanced Energy, Kyoto University, Kyoto, Japan, <sup>2</sup>Graduate School of Energy Science, Kyoto University, Kyoto, Japan, <sup>3</sup>Department of Frontier Bioscience, Hosei University, Tokyo, Japan, <sup>4</sup>CellFree Sciences Co., Ltd., Ehime, Japan, <sup>5</sup>Graduate School of Medicine, Kyoto University, Japan

## S19-6 Restructuring of bacteriophage $\phi$ 6 viral particle activates semi-conservative transcription

Serban L. Ilca<sup>1,2</sup>, Xiaoyu Sun<sup>3</sup>, Esa-Pekka Kumpula<sup>4</sup>, Katri Eskelin<sup>3</sup>, David I. Stuart<sup>2</sup>, Minna M. Poranen<sup>3</sup>, Juha Huiskonen<sup>2,4</sup>

<sup>1</sup>New York Structural Biology Center, Simons Electron Microscopy Center, New York, NY, USA, <sup>2</sup>Division of Structural Biology, Centre for Human Genetics, University of Oxford, Oxford, UK, <sup>3</sup>Molecular and Integrative Biosciences Research Programme, Faculty of Biological and Environmental Sciences, University of Helsinki, Helsinki, Finland, <sup>4</sup>Institute of Biotechnology, Helsinki Institute of Life Science HiLIFE, University of Helsinki, Helsinki, Finland

### Symposium 20

Room E

#### 10:00-12:20 Synthetic and Constructive Biology

Chairs

Tomoaki Matsuura (Tokyo Institute of Technology)  
Sheref S. Mansy (Chemistry, University of Alberta)

## S20-1 A potential path to the Darwinian evolution of protocells

Sheref Mansy

University of Alberta, Department of Chemistry, Edmonton, Alberta T6G 2G2, Canada

## Wednesday, June 26

- S20-2**      **Design and construction of artificial cells reproducing cellular functions**  
Yutetsu Kuruma<sup>1,2</sup>, Yasuhiro Shimane<sup>1</sup>, Rumie Matsumura<sup>1</sup>, Sumie Eto<sup>3</sup>, Samuel Berhanu<sup>3</sup>  
<sup>1</sup>Japan Agency for Marine-Earth Science and Technology (JAMSTEC), <sup>2</sup>Yokohama City University, <sup>3</sup>Earth-Life Science Institute (ELSI)
- S20-3**      **SUGARS FOR FUNCTION: Enabling protein post-translational modifications in cell-free systems**  
Karen Polizzi<sup>1</sup>, Elli Makrydaki<sup>1</sup>, Oscar Marshall<sup>1</sup>, Rochelle Aw<sup>2</sup>, Farzana Alam<sup>1</sup>, Tejasvi Shivakumar<sup>1</sup>, Akashaditya Das<sup>1</sup>, Cleo Kontoravdi<sup>1</sup>  
<sup>1</sup>Department of Chemical Engineering and Imperial College Centre for Synthetic Biology, London, UK, <sup>2</sup>Department of Bioengineering, Stanford University, Stanford, CA, USA
- S20-4**      **Pigment Reporters for Further Development of Cell Free Systems for Synthetic Biology with Secondary Metabolism**  
Constance B. Bailey<sup>1</sup>, Tien T. Sword<sup>2</sup>, Jaime Lorenzo N. Dinglasan<sup>2,3</sup>, J. William J. William Barker<sup>2</sup>, Ghaeath S.K. Abbas<sup>1</sup>, Madeline E. Spradley<sup>2</sup>, Scott J. Emrich<sup>1</sup>, Michael A. Gilchrist<sup>2</sup>, Mitchell J. Doktycz<sup>2</sup>  
<sup>1</sup>University of Sydney, School of Chemistry, Sydney NSW, Australia, <sup>2</sup>University of Tennessee-Knoxville, Knoxville, TN, USA, <sup>3</sup>Oak Ridge National Laboratory, Oak Ridge, TN, USA
- S20-5**      **Synthetic approaches to biomolecular motors**  
Ken'ya Furuta<sup>1,2</sup>  
<sup>1</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, Hyogo, Japan, <sup>2</sup>Department of Biological Sciences, Graduate School of Science, Osaka University, Osaka, Japan

# Oral Sessions

## The Young Investigator Award Lecture

Room A

16:00-16:40 **Structural and functional diversity in light-gated ion channels: channelrhodopsins**

Chairs Manuel Prieto (iBB/IST-Institute for Bioengineering and Bioscience, University of Lisbon, Portugal)  
Anthony Watts (University of Oxford, UK)

**YIA**

**Structural and functional diversity in pump-like cation channelrhodopsins**

Hideaki Kato  
The University of Tokyo

## BPS Award Lecture

Room B-1

16:40-17:30 **Accurate Models for Interrogating and Engineering Biomolecular Condensates**

Chair Kumiko Hayashi (The University of Tokyo)  
Presenter Jennifer Pesanelli (Biophysical Society)

**BPS**

**Accurate models for interrogating and engineering biomolecular condensates**

Jerelle A Joseph<sup>1,2</sup>

<sup>1</sup>Department of Chemical and Biological Engineering, Princeton University, USA,

<sup>2</sup>Omenn-Darling Bioengineering Institute, Princeton University, USA

## Keynote 2

Room A

17:00-17:50 **Molecular Simulations Open a Window into Cellular Dynamics**

Chair Yuji Sugita (RIKEN)

**KL-2**

**Molecular simulations open a window into cellular dynamics**

Gerhard Hummer<sup>1,2</sup>

<sup>1</sup>Department of Theoretical Biophysics, Max Planck Institute of Biophysics, Frankfurt am Main, Germany, <sup>2</sup>Institute for Biophysics, Goethe University Frankfurt, Frankfurt am Main, Germany



## Wednesday, June 26

Keynote 3	Room B-1
17:00-17:50	<b>Cytoplasmic Dynamics and Mechanics in the Maturation and Aging of Mammalian Oocytes</b>
Chair	Jie Yan (National University of Singapore)

**KL-3**      **Cytoplasmic Dynamics and Mechanics in the Maturation and Aging of Mammalian Oocytes**  
Rong Li  
Mechanobiology Institute, National University of Singapore

**Plenary IUPAB Ramachandran Lecture****Room B-1**

9:00-9:50

**Design of New Protein Functions using Deep Learning**

Chair

Nobuyasu Koga (Osaka University)

**PL-3****Design of New Protein Functions using Deep Learning**

David Baker

Biochemistry, Genome Sciences, Bioengineering, Chemical Engineering, Computer Science and Physics, University of Washington, USA

**Symposium 21****Room A**

10:00-12:20

**Computational Molecular Biophysics**

Chairs

Shoji Takada (Graduate School of Science, Kyoto University)

Cecilia Clementi (Physics, Freie Universität Berlin)

**S21-1****Modeling the Genome: A View by a Physicist**

José Onuchic

Center for Theoretical Biological Physics, Rice University, Houston TX 77005, USA

**S21-2****Physicochemical regulation of the liquid-like organisation of chromatin**Rosana Collepardo-Guevara<sup>1,2,3</sup>, Stephen Farr<sup>2</sup>, Maria Julia Maristany<sup>2</sup>, Jan Huertas<sup>1</sup><sup>1</sup>Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge,<sup>2</sup>Cavendish Laboratory, Department of Physics, University of Cambridge, Cambridge, UK, <sup>3</sup>Department of Genetics, University of Cambridge, Cambridge, UK**S21-3****Solvent constraints for biopolymer folding and evolution in extraterrestrial environments**Ignacio Sánchez<sup>1,2</sup>, Ezequiel Galpern<sup>1,2</sup>, Diego U. Ferreiro<sup>1,2</sup><sup>1</sup>Universidad de Buenos Aires, Facultad de Ciencias Exactas y Naturales, Departamento de Química Biológica, Laboratorio de Fisiología de Proteínas, Buenos Aires, Argentina, <sup>2</sup>CONICET-Universidad de Buenos Aires, Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales (IQUIBICEN), Buenos Aires, Argentina.**S21-4****Changes in VEGFR by VEGF: Pursuing activation mechanism and drug targeting via computer simulations**Young Min Rhee, Yeon Ju Go, Mahroof Kalathingal

Korea Advanced Institute of Science and Technology

**Thursday, June 27**

- S21-5**      **Multiscale biomolecular simulations for chromatin and transcription regulation**  
 Shoji Takada  
 Graduate School of Science, Kyoto University

**Symposium 22****Room B-1**

10:00-12:20    **Bacterial/Archaeal Supermolecular Assembly**  
 Chairs        Isil Tulum (Faculty of Science/ Department of Biology, Istanbul University)  
                   Daisuke Nakane (Department of Engineering Science, The University of Electro-Communications)

- S22-1**      **Phototaxis and control of type IV pilus functions**  
Annegret Wilde<sup>1</sup>, Nils Schuergers<sup>1</sup>, Jonas Hammerl<sup>1</sup>, Yu Han<sup>1</sup>,  
 Shylaja Mohandass<sup>2</sup>, Conrad Mullineaux<sup>2</sup>  
<sup>1</sup>University of Freiburg, Germany, <sup>2</sup>Queen Mary University of London, United Kingdom
- S22-2**      **Cell surface architecture of a nano-sized archaeon Nanobdella aerobiophila**  
 Shingo Kato  
 Japan Collection of Microorganisms (JCM), RIKEN BioResource Research Center
- S22-3**      **Development of Protein-Based Strategies for Detection, Identification and Controlling Plant Pathogenic Phytoplasmas**  
Isil Tulum, Kayhan Derecik  
 Istanbul University, Faculty of Science, Department of Biology
- S22-4**      **Coevolution of glycosylation, flagellar motor and cell shape in Campylobacter jejuni for efficient host**  
 Eli Cohen  
 Imperial College London
- S22-5**      **Dissecting the structure and function of the bacterial flagellar motor.**  
 Anna Roujeinikova  
 Department of Microbiology, Infection and Immunity Program, Monash Biomedicine Discovery Institute, Monash University, Melbourne, Victoria, Australia
- S22-6**      **From Inactivity to Motion: Uncovering Motility Dynamics of Alcanivorax Borkumensis**  
 Shufneg Zhao  
 Grad. Sch. of Sci. and tech., Univ. of Tsukuba

# Oral Sessions

## Symposium 23

Room B-2

10:00-12:20

### Optogenetics and Photobiology

Chairs

Keiichi Inoue (The Institute for Solid State Physics, The University of Tokyo)

Kota Katayama (Life Science and Applied Chemistry, Nagoya Institute of Technology)

#### **S23-1** The search for new carotenoid light-harvesting systems in microbial rhodopsins

Oded Béjà

Faculty of Biology, Technion – Israel Institute of Technology, Haifa, Israel

#### **S23-2** MULTIPLE RETINAL ISOMERIZATIONS DURING THE EARLY PHASE OF THE BESTRHODOPSIN PHOTOREACTIONS

Spyridon Kaziannis<sup>1,4</sup>, Matthias Broser<sup>3</sup>, Ivo H.M. van Stokkum<sup>2</sup>, Jakub Dostal<sup>4</sup>, Wayne Busse<sup>3</sup>, Arno Munhoven<sup>3</sup>, Cesar Bernardo<sup>4</sup>, Miroslav Kloz<sup>4</sup>, Peter Hegemann<sup>3</sup>, John T.M. Kennis<sup>2</sup><sup>1</sup>University of Ioannina, Ioannina, <sup>2</sup>Vrije Universiteit, Amsterdam, <sup>3</sup>Humboldt University, Berlin, <sup>4</sup>ELI Beamlines, Prague

#### **S23-3** Structural Dynamics of Microbial Rhodopsins Captured by X-ray Free Electron Lasers

Eriko Nango

Institute of Multidisciplinary Research for Advanced Materials, Tohoku University

#### **S23-4** Photoisomerization Mechanism of Retinal in Different Microbial Rhodopsins - Insight from Multiscale Simulation

Igor Schapiro

Institute of Chemistry, The Hebrew University of Jerusalem, Israel

#### **S23-5** Coral opsins: unique spectral tuning and G protein selectivity

Akihisa Terakita

Department of Biology, Graduate School of Science, Osaka Metropolitan University, Osaka, Japan

**Thursday, June 27****Symposium 24****Room C-2**

10:00-12:20

**Chromatin Dynamics and Imaging**

Chairs

Kazuhiro Maeshima (Department of Chromosome Science, National Institute of Genetics)

Vadim Backman (Biomedical Engineering, Northwestern University)

**S24-1****Chromatin domains as an emergent property: how cells learn to regulate epigenetic memory and transcriptional reprogramming**Vadim Backman<sup>1,2</sup><sup>1</sup>Department of Biomedical Engineering, Northwestern University, <sup>2</sup>Center for Physical Genomics & Engineering, Northwestern University**S24-2****Replication-dependent histone (Repli-Histo) labeling specifically visualizes physical properties of euchromatin/heterochromatin in living human cells.**Katsuhiko Minami<sup>1,2</sup>, Satoru Ide<sup>1,2</sup>, Sachiko Tamura<sup>1,2</sup>, Kazuhiro Maeshima<sup>1,2</sup><sup>1</sup>National Institute of Genetics, Japan, <sup>2</sup>Graduate Institute for Advanced Studies, SOKENDAI**S24-3****Understanding the Regulatory Grammar of Enhancers and Silencers: Biophysical Insights from Machine Learning**Ryan Friedman, Avinash Ramu, Sara Lichtarge, Yawei Wu, Lloyd Tripp, Daniel Lyon, Connie Myers, David Granas, Maria Gause, Joeseoph Corbo, Barak Alon Cohen, Michael White

Washington University School of Medicine, Saint Louis, MO 63110

**S24-4****What phase of matter is the chromosome -- and why should the living cell care?**

Olga K. Dudko

University of California at San Diego

**S24-5****THE PIONEER TRANSCRIPTION FACTOR OCT4 ALTERS CHROMATIN PACKING**Jan Huertas<sup>1,2</sup>, M. Julia Maristany<sup>3</sup>, Rosana Collepardo-Guevara<sup>1,2</sup><sup>1</sup>Yusuf Hamied Department of Chemistry - University of Cambridge, <sup>2</sup>Department of Genetics - University of Cambridge, <sup>3</sup>Department of Physics - University of Cambridge

# Oral Sessions

## Symposium 25

**Room D**

10:00-12:20

### Biophysics of Disease

Chairs

Eri Chatani (Graduate School of Science / Department of Chemistry, Kobe University)

Motomasa Tanaka (RIKEN Center for Brain Science)

Lukasz Joachimiak (Center for Alzheimer's and Neurodegenerative Diseases, University of Texas Southwestern Medical Center)

**S25-1**

### Engineered chaperone-mediated disaggregation and degradation of yeast prions

Motomasa Tanaka

RIKEN Center for Brain Science, Japan

**S25-2**

### How heterotypic amyloid interactions determine amyloid pathology

 Nikolaos Louros<sup>1,2</sup>, Katerina Konstantoulea<sup>1,2</sup>, Frederic Rousseau<sup>1,2</sup>,  
 Joost Schymkowitz<sup>1,2</sup>
<sup>1</sup>Switch Laboratory, VIB Center for Brain and Disease Research, Herestraat 49, 3000 Leuven, Belgium, <sup>2</sup>Switch Laboratory, Department of Cellular and Molecular Medicine, KU Leuven, Herestraat 49, 3000 Leuven, Belgium

**S25-3**

### Visualizing Amyloid Oligomers, the Dark Matter of Alzheimer's Disease

 David Robert Boyer<sup>1</sup>, Peng Ge<sup>1</sup>, Romany Abshkaron<sup>1</sup>, Roni Haj Hussein<sup>1</sup>,  
 Yi Xiao Jiang<sup>1</sup>, Alejandro Foley<sup>2</sup>, Ka Chan<sup>2</sup>, Jevgenji Raskatov<sup>2</sup>,  
 David Eisenberg<sup>1</sup>
<sup>1</sup>Department of Biological Chemistry, University of California, Los Angeles, USA,

<sup>2</sup>Department of Chemistry and Biochemistry, University of California, Santa Cruz, USA

**S25-4**

### Unveiling the Mechanism of Protein Aggregation to Form Oligomers and Protofibrils: A Study Using Insulin as a Model

Eri Chatani, Keisuke Yuzu

Graduate School of Science, Kobe University

**S25-5**

### Chemical and structural bases for fibril aggregate formation of RNA-binding proteins with low-complexity domains by neurodegenerative disease mutations.

 Masato Kato<sup>1,2</sup>, Nobuo Maita<sup>2</sup>, Kim Sunyong<sup>2</sup>, Yuko Kajino<sup>2</sup>
<sup>1</sup>Department of Biochemistry, University of Texas Southwestern Medical Center,

 Dallas, TX USA,, <sup>2</sup>Institute for Quantum Life Science, National Institutes for Quantum Science and Technology (QST), Chiba, JAPAN

**Thursday, June 27****S25-6 Investigation of Toxicity and Structural Mechanism of Dipeptide Repeats in ALS and the Therapeutic Strategy**

Yun-Ru (Ruby) Chen

Genomics Research Center, Academia Sinica

**S25-7 Engineering proteins to control amyloid assembly**

Lukasz Joachimiak

University of Texas Southwestern Medical Center

**S25-8 Unlocking Ribosome Heterogeneity: High-Resolution Genome-Wide Positional Sequencing and Its Implications in Disease Research**Gabriella Viero<sup>1</sup>, Fabio Lauria<sup>1</sup>, Toma Tebaldi<sup>2</sup>, Lorenzo Lunelli<sup>3</sup>, Gregor Anderluh<sup>4</sup>, Thomas Gillingwater<sup>5</sup><sup>1</sup>Institute of Biophysics CNR Italy, <sup>2</sup>University of Trento, Trento, Italy, <sup>3</sup>Bruno Kessler Foundation (FBK), Trento, Italy, <sup>4</sup>National Institute of Chemistry, Ljubljana, Slovenia, <sup>5</sup>University of Edinburgh, Edinburgh, United Kingdom**Symposium 26****Room B-1**

16:00-18:20

**Applications of Non-equilibrium Physics**

Chairs

Kumiko Hayashi (The University of Tokyo)

Chun-Biu Li (Faculty of Science/Mathematics Department, Stockholm University)

**S26-1 Kinetic basis of G-quadruplex selective stabilizing ligands revealed by single-molecule manipulation**Huijuan You, Yashuo Zhang, Yuanlei Cheng

School of Pharmacy, Tongji Medical College, Huazhong University of Science and Technology

**S26-2 Nonequilibrium energetics and noise-induced acceleration of molecular motor, kinesin-1**

Takayuki Ariga

Graduate School of Frontier Biosciences, Osaka University, Osaka, Japan

**S26-3 Active fluctuations of cytoplasmic actomyosin networks facilitate dynein-driven intracellular transports along microtubules**Takayuki Torisawa<sup>1,2</sup>, Kei Saito<sup>2,3</sup>, Ken'ya Furuta<sup>4</sup>, Akatsuki Kimura<sup>1,2</sup><sup>1</sup>Cell Architecture Laboratory, National Institute of Genetics, <sup>2</sup>Department of Genetics, Graduate University for Advanced Studies (SOUKENDAI), <sup>3</sup>Physics and Cell Biology Laboratory, National Institute of Genetics, <sup>4</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology

# Oral Sessions

- S26-4**      **Drug the Allosteric Site of a Cancer Target Revealed by Time-Dependent Linear Response Theory**  
Lee-Wei Yang<sup>1,2,3,5</sup>, Bang-Chieh Huang<sup>1</sup>, Pramod Shah<sup>1</sup>, Yi-Yun Cheng<sup>4</sup>, Chi-Hong Chang-Chein<sup>1</sup>, Kuan-Chou Chen<sup>6</sup>, Chao-Ling Yao<sup>6</sup>  
<sup>1</sup>Institute of Bioinformatics and Structural Biology, National Tsing Hua University, Hsinchu 300044, Taiwan, <sup>2</sup>PhD program in Biomedical Artificial Intelligence, National Tsing Hua University, Hsinchu 300044, Taiwan, <sup>3</sup>Physics Division, National Center for Theoretical Sciences, Taipei 106319, Taiwan, <sup>4</sup>Praexisio Inc., San Diego, CA92121, USA, <sup>5</sup>Bioinformatics & CBMB Programs, Academia Sinica, Taipei 115201, Taiwan, <sup>6</sup>Department of Chemical Engineering, National Cheng Kung University, Tainan 70101, Taiwan
- S26-5**      **Microbial competition in expanding colony: Emergent collective alignment gives an advantage to longer cells**  
 Nathan van den Berg, Kristian Thijssen, Thu Trang Nguyen, Adrien Sarlet, Mireia Cordero, Alba Garcia Vazquez, Namiko Mitarai, Amin Doostmohammadi, Liselotte Jauffred  
 The Niels Bohr Institute, University of Copenhagen
- S26-6**      **Single-molecule dynamics across phase boundaries in active biomolecular condensates**  
Stefano Bo<sup>1</sup>, Lars Hubatsch<sup>2</sup>, Jonathan Bauermann<sup>3</sup>, Christoph Weber<sup>4</sup>, Frank Jülicher<sup>5</sup>  
<sup>1</sup>King's College London, London, United Kingdom, <sup>2</sup>Max Planck Institute for Cell Biology and Genetics, Dresden, Germany, <sup>3</sup>Harvard University, Cambridge, United States of America, <sup>4</sup>Augsburg University, Augsburg, Germany, <sup>5</sup>Max Planck Institute for the Physics of Complex Systems, Dresden, Germany

## Symposium 27

Room B-2

16:00-18:20

### DNA/Chromatin Physics

Chairs

Tsuyoshi Terakawa (Faculty of Science / Department of Biophysics, Kyoto University)

Eric C. Greene (Biochemistry & Molecular Biophysics, Columbia University)

### S27-1

### Unveiling the Molecular Mechanism of Histone Recycling through Biophysical Approaches

Tsuyoshi Terakawa

Department of Biophysics, Graduate School of Science, Kyoto University



**Thursday, June 27**

- S27-2**      **New Paradigms for Rad51 paralog function**  
Eric Greene  
Columbia University, Department of Biochemistry and Molecular Biophysics
- S27-3**      **Machines on Genes: A Single-Molecule Perspective**  
Shixin Liu  
The Rockefeller University, New York, USA
- S27-4**      **Mismatch Elimination in human DNA mismatch repair**  
Jong-Bong Lee  
Department of Physics, School of Interdisciplinary Bioscience & Bioengineering,  
Medical Science & Engineering POSTECH, Pohang, Korea
- S27-5**      **G-quadruplex Structures Formed by Human Telomeric and C9orf72 DNA and RNA**  
Guang Zhu, Changdong Liu, Naining Xu, Monica Suen, Bin Yan, Qing Yi  
The Hong Kong University of Science and Technology

**Symposium 28****Room C-2**16:00-18:20      **Membraneless Organelle, Autophagy, Liquid-liquid Phase Separation**Chairs      Miho Yanagisawa (Graduate School of Arts and Sciences, University of Tokyo)  
Arslan Siddique (Chemistry, University of New South Wales)**S28-1**      **How does membrane confinement at the cell size change the phase separation of macromolecules?**Miho Yanagisawa  
Graduate School of Arts and Sciences, The University of Tokyo**S28-2**      **Cell-inspired biomimetic droplets**Anderson Ho Cheung Shum<sup>1,2</sup>  
<sup>1</sup>The University of Hong Kong, <sup>2</sup>Advanced Biomedical Instrumentation Centre**S28-3**      **Capillary force in cells: functional bio-condensate wetting**Roland L. Knorr<sup>1,2,3</sup>  
<sup>1</sup>Interfacial Cell Biology Lab, Humboldt-Universität zu Berlin, Germany, <sup>2</sup>University of Cologne, Faculty of Medicine and University Hospital Cologne, Germany, <sup>3</sup>Graduate School and Faculty of Medicine, The University of Tokyo, Japan

# Oral Sessions

## S28-4 Deciphering the molecular mechanism of DNA-protein interactive co-condensates

Zhi Qi<sup>1</sup>, Cheng Li<sup>1</sup>, Yunqiang Bian<sup>2</sup>, Wenfei Li<sup>2,3</sup>

<sup>1</sup>Center for Quantitative Biology, Peking-Tsinghua Center for Life Sciences, Academy for Advanced Interdisciplinary Studies, Peking University, Beijing 100871, China, <sup>2</sup>Wenzhou Key Laboratory of Biophysics, Wenzhou Institute, University of Chinese Academy of Sciences, Wenzhou, Zhejiang 325000, China, <sup>3</sup>Department of Physics, National Laboratory of Solid-State Microstructure, and Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing 210093, China

## S28-5 Condensates' interface triggers the liquid-to-solid transition

Yi Shen<sup>1</sup>, David Weitz<sup>2</sup>, Daniele Vigolo<sup>3</sup>, Tuomas Knowles<sup>4</sup>

<sup>1</sup>School of Chemical and Biomolecular Engineering, The University of Sydney, <sup>2</sup>School of Engineering and Applied Sciences, Harvard University, <sup>3</sup>School of Biomedical Engineering, The University of Sydney, <sup>4</sup>Yusuf Hamied Department of Chemistry, University of Cambridge

### Symposium 29

Room D

#### 16:00-18:20 Soft Matter Biophysics

Chairs

Patricia Bassereau (Physical Chemistry Curie, Institut Curie)

Masaki Sasai (Fukui Institute for Fundamental Chemistry, Kyoto University)

## S29-1 Active Topological Defects and Universal Symmetries in Living Biological Matter

Amin Doostmohammadi

Niels Bohr Institute, University of Copenhagen

## S29-2 On the role of polymerases in shaping the 4D Genome

Daniel Jost<sup>1</sup>, Dario D'Asaro<sup>1,2</sup>, Hossein Salari<sup>1,2</sup>, Cedric Vaillant<sup>2</sup>, Jean-Michel Arbona<sup>1</sup>

<sup>1</sup>Laboratoire de Biologie et Modélisation de la Cellule, École Normale Supérieure de Lyon, CNRS, UMR5239, Inserm U1293, Université Claude Bernard Lyon 1, 46 Allée d'Italie, 69007 Lyon, France, <sup>2</sup>École Normale Supérieure de Lyon, CNRS, Laboratoire de Physique, 46 Allée d'Italie, 69007 Lyon, France

## S29-3 Formation of chromatin domains without loop extrusion: the chromatin capture model of interphase cohesin

Shin Fujishiro<sup>1</sup>, Masaki Sasai<sup>1,2</sup>

<sup>1</sup>Fukui Institute for Fundamental Chemistry, Kyoto University, Kyoto, Japan,

<sup>2</sup>Department of Complex Systems Science, Nagoya University, Nagoya, Japan

# Thursday, June 27

**S29-4 Lipid membranes and membrane proteins: Not a coexistence but an intimate relationship.**

Alicia Damm<sup>1</sup>, Raju Regmi<sup>1</sup>, Su-Jin Paik<sup>1</sup>, Raj-Kumar Sadhu<sup>1</sup>,  
Jacob Kaestel-Hansen<sup>2</sup>, Maxime Dahan<sup>1</sup>, Nikos Hatzakis<sup>2</sup>, Pierre Sens<sup>1</sup>,  
Daniel Lévy<sup>1</sup>, [Patricia Bassereau](#)<sup>1</sup>

<sup>1</sup>Institut Curie, Paris, France, <sup>2</sup>Nano-Science Center, Copenhagen, Denmark

**S29-5 Nonlinear Dynamics of the Auditory System**

[Dolores Bozovic](#), Justin Faber

Dept. of Physics and Astronomy, University of California Los Angeles, USA

## Hands-on Training Session B

Room E

10:00-12:20 **Visualizing the Nanometer World in Liquid by Bio-SPMs**

Chair [Noriyuki Kodera](#) (Kanazawa University)

**HT-B-1 Visualizing Nanoscale Dynamics and Mechanics in Living Cells by Nanoendoscopy AFM**

Takeshi Fukuma  
Kanazawa University

**HT-B-2 Nanoscale analysis of microbial cell walls using AFM**

[Keisuke Miyazawa](#)<sup>1,2</sup>, Takeshi Fukuma<sup>1,2</sup>

<sup>1</sup>Kanazawa University, <sup>2</sup>WPI-NanoLSI

**HT-B-3 Visualizing surface dynamics of living cells at nanometer scale resolution with scanning ion conductance microscopy**

Shinji Watanabe

Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Ishikawa, Japan

**HT-B-4 Biological Nanopore Probes for Scanning Ion Conductance Microscopy**

Kan Shoji

Nagaoka University of Technology

**HT-B-5 Single-molecule imaging of AMPA-type glutamate receptors by high-speed atomic force microscopy**

Mikihiro Shibata

Kanazawa University

# Oral Sessions

- HT-B-6**      **HS-AFM analysis of microtubule-binding proteins in solution**  
 Marina Ohno<sup>1</sup>, Hayato Shibuya<sup>1</sup>, Noriyuki Kodera<sup>2</sup>, Ikuko Hayashi<sup>1</sup>  
<sup>1</sup>Biomed. Sci., Yokohama City Univ., <sup>2</sup>NanoLSI, Kanazawa Univ.

## Asian Biophysics Association (ABA) Symposium

Room E

16:00-18:20

### Asian Biophysics Association (ABA) Symposium

Chairs

Shang-Te Danny Hsu (Institute of Biological Chemistry, President of ABA, member of Biophysical Society of R.O.C, Academia Sinica)

Haibin Su (Chemistry, Member of The Biophysical Society of Hong Kong, Hong Kong University of Science and Technology)

#### ABA-1

Elizabeth Hinde

School of Physics, Faculty of Science, President of The Australian Society for Biophysics (ASB), The University of Melbourne

#### ABA-2

Tao Xu

President of Biophysica Society of China (BSC), Guangzhou Laboratory

#### ABA-3

Haibin Su

Chemistry, Member of The Biophysical Society of Hong Kong, Hong Kong University of Science and Technology

#### ABA-4

Ruchi Anand

Vice-President of The Indian Biophysical Society (IBS), Indian Institute of Technology Bombay

#### ABA-5

Satoshi Takahashi

Institute of Multidisciplinary Research for Advanced Materials, President of the Biophysical Society of Japan (BSJ), Tohoku University

#### ABA-6

Hyun-Ho Lim

Lab Head, Molecular Physiology and Biophysics Laboratory, President of The Korean Biophysical Society (KBPS), Korea Brain Research Institute

#### ABA-7

Shang-Te Danny Hsu

Institute of Biological Chemistry, President of ABA, member of Biophysical Society of R.O.C, Academia Sinica

#### ABA-8

### ABA Young Investigator Award Lecture

### Deciphering the Complexity in Biological Interaction

Tetsuhiro S. Hatakeyama

Earth Life Science Institute (ELSI), Tokyo Institute of Technology, Tokyo, Japan

# Thursday, June 27

The Bei Lecture		Room A
18:30-19:10	<b>Nanozyme, a new biological catalyst and its applications</b>	
Chair	Tao Xu (National Laboratory of Biomacromolecules, Guangzhou)	

**BL**      **Nanozyme, a new biological catalyst and its applications**  
Xiyun Yan  
Institute of Biophysics, Chinese Academy of Sciences

**Keynote 4**

Room B-1

9:00–9:50

**Decoding regeneration using computer designed proteins**

Chair

Ikuko Fujiwara (Nagaoka University of Technology)

**KL-4****Decoding regeneration using computer designed proteins**Hannele Ruohola-Baker<sup>1,2</sup><sup>1</sup>Department of Biochemistry, University of Washington, Seattle, WA, USA, <sup>2</sup>Institute for Stem Cell & Regenerative Medicine, University of Washington, Seattle, WA, USA**Symposium 30**

Room B-1

10:00–12:20

**Structure, Function and Biophysics of the Bacterial Motility and Flagellar Motor**

Chairs

Matthew Baker (School of Biotechnology and Biomolecular Science, University of New South Wales)

Seiji Kojima (Department of Biological Science, Graduate School of Science, Nagoya University)

**S30-1****Spatio-temporal dynamics of the proton motive force on single bacterial cells**Anaïs Biquet-Bisquert<sup>1</sup>, Baptiste Carrio<sup>1</sup>, Nathan Meyer<sup>1</sup>,  
Thales Fernandes<sup>1</sup>, Manouk Abkarian<sup>1</sup>, Farida Seduk<sup>2</sup>, Axel Magalon<sup>2</sup>,  
Ashley Nord<sup>1</sup>, Francesco Pedaci<sup>1</sup><sup>1</sup>Centre de Biologie Structurale, Université de Montpellier, CNRS, INSERM, Montpellier, France, <sup>2</sup>Aix Marseille Université, CNRS, Laboratoire de Chimie Bactérienne (UMR7283), IMM, IM2B, 13402, Marseille, France**S30-2****Diversity of flagellar system – What do we learn from *H. pylori*?**Wing Ngor Shannon Au, Kailei Sun, Liyang Sun, Wendy Wai Ling Lam  
Chinese University of Hong Kong**S30-3****EMBO Young Investigator Lecture****5:2 molecular motors – from bacterial motility to anti-phage defense**

Nicholas M. I. Taylor

NNF Center for Protein Research, University of Copenhagen

**S30-4****Adhesins and flagella-dependent bacterial surface motility**

Shuichi Nakamura

Grad. Sch. Eng., Tohoku Univ.

**Friday, June 28****S30-5 A cell-surface conveyor belt controls the rotational direction of its driver**

Abhishek Shrivastava  
Biodesign Institute, Arizona State University

**S30-6 Protein engineering via directed evolution of the stator subunit of the bacterial flagellar motor**

Pietro Ridone<sup>1</sup>, Tsubasa Ishida<sup>3</sup>, Angela Lin<sup>1</sup>, David Humphreys<sup>4</sup>,  
Eleni Giannoulatou<sup>4</sup>, Yoshiyuki Sowa<sup>3</sup>, Matthew Baker<sup>1,2</sup>  
<sup>1</sup>School of Biotechnology and Biomolecular Science, UNSW Sydney, Sydney, Australia, <sup>2</sup>Institute of Molecular Biology and Biotechnology, FoRTH, Heraklion, Crete, Greece, <sup>3</sup>Hosei University, Kanagawa, Japan, <sup>4</sup>Victor Chang Cardiac Research Institute, Darlinghurst, Australia

**Symposium 31****Room B-2****10:00-12:20 Stem Cells and Organoids**

Chairs  
Minoru Takasato (Center for Biosystems Dynamics Research, RIKEN)  
Andras Lakatos (Department of Clinical Neurosciences, University of Cambridge)

**S31-1 Generation of Urinary Tract Organoids from Human Pluripotent Stem Cells**

Minoru Takasato<sup>1,2,3</sup>  
<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, <sup>2</sup>Graduate School of Biostudies, Kyoto University, <sup>3</sup>Graduate School of Medicine, Osaka University

**S31-2 Tailoring autonomous trial-and-error by robots and AI (robotic search system) for Biophysics**

Genki Kanda<sup>1</sup>, Taku Tsuzuki<sup>2</sup>, Auto Culture Project Team<sup>1,2,3,4,5</sup>,  
Yosuke Ozawa<sup>2</sup>, Masayo Takahashi<sup>3,4</sup>, Koichi Takahashi<sup>1</sup>, Tohru Natsume<sup>5</sup>  
<sup>1</sup>RIKEN, <sup>2</sup>Epistra Inc., <sup>3</sup>Vision Care Inc., <sup>4</sup>VCCT Inc., <sup>5</sup>Robotic Biology Institute Inc.

**S31-3 3D human neural organoid models for interrogating mechanisms and therapeutics in neurodegeneration**

Andras Lakatos  
Department of Clinical Neurosciences, University of Cambridge, Cambridge, UK

# Oral Sessions

## S31-4 Hepato-Biliary-Pancreatic Organogenesis in a Dis

Takanori Takebe<sup>1,2,3,4,5</sup>

<sup>1</sup>Division of Stem Cell & Organoid Medicine, Osaka University, <sup>2</sup>Institute of Research, Tokyo Medical and Dental University, <sup>3</sup>Center for Stem Cell & Organoid Medicine (CuSTOM), Cincinnati Children's Hospital Medical Center, <sup>4</sup>Divisions of Gastroenterology, Hepatology and Nutrition and Developmental Biology, Cincinnati Children's Hospital Medical Center, <sup>5</sup>Communication Design Center, Yokohama City University

## S31-5 Large-scale generation of uniform-sized miniature adipocyte spheroids in hydrogel capsules

Ruri Maekawa, Kazuki Hattori, Sadao Ota

Research Center for Advanced Science and Technology, The University of Tokyo

## S31-6 A state of partial Rb inactivation and intermediate E2F activation safeguards proliferation commitment

Yumi Konagaya

RIKEN Center for Biosystems Dynamics Research

### Symposium 32

Room D

10:00-12:20

#### Origin of Life

Chairs

Ryo Mizuuchi (Department of Electrical Engineering and Bioscience, Faculty of Science and Engineering, Waseda University)

Tony Z. Jia (Earth-Life Science Institute, Tokyo Institute of Technology)

## S32-1 Evolution of Complex Chemical Mixtures Reveals Combinatorial Compression and Population Synchronicity

Moran Frenkel-Pinter<sup>1</sup>, Kavita Matange<sup>2</sup>, Vahab Rajaei<sup>2</sup>,

Pau Capera-Aragonès<sup>1</sup>, John T Costner<sup>2</sup>, Adelaide Robertson<sup>2</sup>,

Jennifer Seoyoung Kim<sup>2</sup>, Anton S Petrov<sup>2</sup>, Jessica C Bowman<sup>2</sup>,

Loren Dean Williams<sup>2</sup>

<sup>1</sup>Institute of Chemistry, The Hebrew University of Jerusalem, Israel 91904, <sup>2</sup>School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, GA 30332-0400 USA



- S32-2**      **The peptides increase the compartmentalization and stability of the protoribosome**  
Tomoko Yamaguchi<sup>1,2,3</sup>  
<sup>1</sup>Earth-Life Science Institute, Tokyo Institute of Technology, Tokyo, Japan,  
<sup>2</sup>Department of Cell Biology, Faculty of Science, Charles University, Prague, Czech Republic, <sup>3</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan
- S32-3**      **Investigating Biophysical Impacts of Prebiotic Milieu on the Membrane Stability using Model Systems**  
Arslan Siddique<sup>1,2</sup>, Lauren A. Lowe<sup>1,2</sup>, Soumya Kanti De<sup>1,2</sup>, Daniel Loo<sup>1,2</sup>, Andrew Nelson<sup>3</sup>, Anna Wang<sup>1,2</sup>  
<sup>1</sup>Australian Centre for Astrobiology, University of New South Wales, NSW 2052, Australia, <sup>2</sup>School of Chemistry, University of New South Wales, NSW 2052, Australia, <sup>3</sup>Australian Centre for Neutron Scattering, ANSTO Sydney, NSW 2232, Australia
- S32-4**      **In vitro selection of primitive catalysts to fill the gap between chemical and enzymatic RNA self-replication systems**  
Seung Soo Oh<sup>1</sup>, Lijun Zhu<sup>2</sup>, Jack Szostak<sup>3</sup>  
<sup>1</sup>Department of Materials Science and Engineering, Pohang University of Science and Technology (POSTECH), 77 Cheongam-Ro, Nam-Gu, Pohang, Gyeongbuk 37673, South Korea, <sup>2</sup>Department of Biochemistry and Biophysics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA 19104, USA, <sup>3</sup>Howard Hughes Medical Institute, Department of Chemistry, The University of Chicago, Chicago, Illinois 60637, USA
- S32-5**      **Reconstruction of Ancient Protein Folds in the Central Dogma Machinery**  
Shunsuke Tagami  
RIKEN BDR

# Oral Sessions

## Symposium 33

Room E

10:00-12:20

### Data Sharing and Open Science

Chairs

Shuichi Onami (RIKEN Center for Biosystems Dynamics Research)

Caterina Strambio-De-Castillia (Molecular Medicine, University of Massachusetts Chan Medical School)

**S33-1**

### SSBD and Global Sharing of Bioimaging Data

Shuichi Onami<sup>1,2,3</sup>

<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, <sup>2</sup>RIKEN Information R&D and Strategy Headquarters, Kobe, Japan, <sup>3</sup>RIKEN, TRIP Headquarters, Kobe, Japan

**S33-2**

### Managing the image-data life cycle for the real world: connecting the dots from sample preparation to image acquisition, analysis, publication, and data reuse

Caterina Strambio-De-Castillia

Program in Molecular Medicine, UMass Chan Medical School, Worcester, MA, USA

**S33-3**

### Chinese Cohort Studies and Data Sharing

Tao Xu<sup>1,2</sup>

<sup>1</sup>Guangzhou Laboratory, <sup>2</sup>Institute of Biophysics, Chinese Academy of Sciences

**S33-4**

### GEMS Informatics: advancing data-driven innovation in agri-food and natural resources management.

Oluwaseun F. Gakenou<sup>1</sup>, David M. Drew<sup>1</sup>, Jan Greyling<sup>2</sup>

<sup>1</sup>Department of Forestry and Wood Science, Stellenbosch University, South Africa,

<sup>2</sup>Stellenbosch Agroinformatics Initiative, Stellenbosch University, South Africa

**S33-5**

### Scalable strategies for a next-generation of FAIR bioimaging

Josh Moore<sup>1,2</sup>

<sup>1</sup>German Biolmaging-Gesellschaft für Mikroskopie und Bildanalyse e.V., Constance, Germany,

<sup>2</sup>Open Microscopy Environment (OME) Consortium

<b>Hands-on Training Session E</b>		<b>Room A</b>
10:00-12:20	<b>Exploring Multi-cellular Mechanics</b>	
Chairs	Makoto Sato (Kanazawa University) Tatsuo Shibata (RIKEN) Shige H. Yoshimura (Kyoto University)	

- HT-E-1**      **Active cytoskeleton controlled through force and shape**  
Yusuke T Maeda<sup>1</sup>, Ryota Sakamoto<sup>1,2</sup>  
<sup>1</sup>Department of Physics, Kyushu University, <sup>2</sup>Department of Biomedical Engineering, Yale University
- HT-E-2**      **Cellular-level left-right asymmetry, cell chirality, induces the chiral collective rotation of multicellular colony**  
Tomoki Ishibashi<sup>1</sup>, Ryohei Nishizawa<sup>1,2</sup>, Goshi Ogita<sup>1</sup>, Tatsuo Shibata<sup>1</sup>  
<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Japan, <sup>2</sup>Graduate School of Frontier Biosciences, Osaka University
- HT-E-3**      **Analysis of Differential Growth in Curved Surface Morphogenesis through Constructing a Conformal Map**  
Kentaro Morikawa<sup>1</sup>, Shinichi Morita<sup>2,3</sup>, Kazuki Sakura<sup>2,4</sup>, Akiteru Maeno<sup>5</sup>, Hiroki Gotoh<sup>6</sup>, Teruyuki Niimi<sup>2,3</sup>, Yasuhiro Inoue<sup>1</sup>  
<sup>1</sup>Department of Micro Engineering, Graduate School of Engineering, Kyoto University, Kyoto, Japan, <sup>2</sup>Division of Evolutionary Developmental Biology, National Institute for Basic Biology, Okazaki, Japan, <sup>3</sup>Basic Biology Program, Graduate Institute for Advanced Studies, The Graduate University for Advanced Studies, SOKENDAI, Okazaki, Japan, <sup>4</sup>Japan Society for The Promotion of Science Research Fellowship, <sup>5</sup>National Institute of Genetics, Shizuoka, Japan, <sup>6</sup>Department of Biological Science, Faculty of Science, Shizuoka University, Shizuoka, Japan
- HT-E-4**      **Tiling mechanisms of the compound eye through geometrical tessellation**  
Steven Davis<sup>1</sup>, Takashi Hayashi<sup>1</sup>, Takamichi Sushida<sup>2</sup>, Masakazu Akiyama<sup>3</sup>, Shin-Ichiro Ei<sup>4</sup>, Makoto Sato<sup>1</sup>  
<sup>1</sup>Kanazawa University, <sup>2</sup>Salesian Polytechnic, <sup>3</sup>Toyama University, <sup>4</sup>Hokkaido University

# Oral Sessions

## HT-E-5 Mechanical waves decode positional information to calibrate wound healing response in zebrafish

Fu-Lai Wen<sup>1</sup>, Marco P. De Leon<sup>2</sup>, Keng-Hui Lin<sup>3</sup>, Chen-Hui Chen<sup>2</sup>

<sup>1</sup>Department of Science Education, National Taipei University of Education, Taipei, Taiwan, <sup>2</sup>Institute of Cellular and Organismic Biology, Academia Sinica, Taipei, Taiwan, <sup>3</sup>Institute of Physics, Academia Sinica, Taipei, Taiwan

## HT-E-6 PIEZO1-mediated mechanosensing regulates the fate of neural progenitor cells during cerebral development

Mayumi Okamoto<sup>1,2</sup>, Tsukasa Shimamura<sup>2</sup>, Takaki Miyata<sup>2</sup>,

Keiko Nonomura<sup>3,4</sup>

<sup>1</sup>Graduate School of Science, Nara Women's University, <sup>2</sup>Graduate School of Medicine, Nagoya University, <sup>3</sup>School of Life Science and Technology, Tokyo Institute of Technology, <sup>4</sup>Division of Embryology, National Institute of Basic Biology

### Hands-on Training Session C

Room C-2

10:00-12:20 **CHARMM-GUI/GENESIS MD Tutorial**

Chairs  
Wonpil Im (Lehigh University)  
Yuji Sugita (RIKEN)

## HT-C-1 Three routes to molecular movies

Helmut Grubmuller, Maxim Igaev, Lars Bock, Steffen Schultze  
Max Planck Institute for Multidisciplinary Sciences, Goettingen, Germany

## HT-C-2 Modeling multi-state structures of proteins and simulating their conformational transitions

Jiaxuan Li, Song Yang, Chen Song  
Peking University, Beijing, China

## HT-C-3 Multiscale Simulations of Enzyme Mechanisms: Bridging Catalysis, Conformational Changes and Ligand Release

Kwangho Nam  
Department of Chemistry and Biochemistry, University of Texas at Arlington, Arlington, TX 76019, USA

**HT-C-4**      **Exploring Allosteric Changes in the Conformational Landscape of Src Kinase upon Substrate Binding by GENESIS**

Song-Ho Chong<sup>1,2</sup>, Hiraku Oshima<sup>1,3</sup>, Yuji Sugita<sup>1,4,5</sup>

<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, <sup>2</sup>Faculty of Life Sciences, Kumamoto University, Kumamoto, Japan, <sup>3</sup>Graduate School of Science, University of Hyogo, Hyogo, Japan, <sup>4</sup>RIKEN Center for Computational Science, Kobe, Japan, <sup>5</sup>RIKEN Center for Pioneering Research, Saitama, Japan

**HT-C-5**      **Computational Explorations of Chromatin Structure and Dynamics: from Single Nucleosomes to Entire Genes**

Giovanni Brandani

Department of Biophysics, Graduate School of Science, University of Kyoto

**HT-C-6**      **WHAT CAN CHARMM-GUI DO FOR YOU?**

Wonpil Im

Biological Sciences, Lehigh University, Bethlehem, PA USA



# Poster Sessions

---

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

### **\*25P-001    The molecular structure of an axle-less F1-ATPase**

Emily Furlong<sup>1,2</sup>, Ian Reiniger-Chatzgian<sup>1</sup>, Yi Zeng<sup>1,3</sup>, Simon Brown<sup>4</sup>, Meghna Sobti<sup>1,3</sup>, Alastair Stewart<sup>1,3</sup>

<sup>1</sup>Molecular, Structural and Computational Biology Division, The Victor Chang Cardiac Research Institute, Darlinghurst, Australia, <sup>2</sup>Division of Biomedical Science and Biochemistry, Research School of Biology, Australian National University, Acton, ACT, Australia, <sup>3</sup>St Vincent's Clinical School, Faculty of Medicine, UNSW Sydney, Kensington, Australia, <sup>4</sup>School of Chemistry and Molecular Bioscience, Molecular Horizons, and Australian Research Council Centre for Cryo-electron Microscopy of Membrane Proteins, University of Wollongong, Wollongong, NSW, Australia

### **\*25P-002    The role of charges in the enzymatic mechanism of acetoacetate decarboxylase**

Masato Ishizaka<sup>1,2</sup>, Sören Rindfleisch<sup>1,2</sup>, Florian Auer<sup>1,2</sup>, Lukas Gingeleit<sup>1,2</sup>, Tat Cheng<sup>3</sup>, Michael Bielecki<sup>4</sup>, Fabian Rabe von Pappenheim<sup>1,2</sup>, Elke Penka<sup>1,2</sup>, Ronald Kluger<sup>4</sup>, Eri Sakata<sup>3</sup>, Kai Tittmann<sup>1,2</sup>

<sup>1</sup>Department of Molecular Enzymology, Georg-August University Göttingen, Göttingen, Germany., <sup>2</sup>Max-Planck-Institute for Multidisciplinary Sciences, Göttingen, Germany., <sup>3</sup>Institute for Neuropathology, University Medical Center Göttingen, Göttingen, Germany., <sup>4</sup>Davenport Chemistry Laboratories, Department of Chemistry, University of Toronto, Toronto, Canada.



## Tuesday, June 25

- \*25P-003**     **Structural insights into the allosteric inhibition of P2X4 receptors**  
Cheng Shen<sup>1</sup>, Yuqing Zhang<sup>2</sup>, Wenwen Cui<sup>2</sup>, Yimeng Zhao<sup>1</sup>, Danqi Sheng<sup>1</sup>,  
 Xinyu Teng<sup>1</sup>, Miaoqing Shao<sup>2</sup>, Muneyoshi Ichikawa<sup>1</sup>, Jin Wang<sup>2</sup>,  
 Motoyuki Hattori<sup>1</sup>  
<sup>1</sup>Fudan University, Shanghai, China, <sup>2</sup>China Pharmaceutical University, Nanjing, China
- \*25P-004**     **Cryo-EM Structure of P-glycoprotein Bound by Three Elacridar P-gp-Inhibitor Molecules**  
Norie Hamaguchi<sup>1,2,3</sup>, Naruhiko Adachi<sup>4</sup>, Toshio Moriya<sup>4</sup>, Masato Kawasaki<sup>4</sup>,  
 Satoshi Yasuda<sup>3</sup>, Naohiko Anzai<sup>2</sup>, Toshiya Senda<sup>4</sup>, Satoshi Ogasawara<sup>3</sup>,  
 Takeshi Murata<sup>3</sup>  
<sup>1</sup>Graduate School of Medical and Pharmaceutical Sciences, Chiba University,  
<sup>2</sup>Graduate School of Medicine, Chiba University, <sup>3</sup>Graduate School of Science, Chiba  
 University, <sup>4</sup>Structural Biology Research Center, Institute of Materials Structure  
 Science, High Energy Accelerator Research Organization
- \*25P-005**     **Structural insights into the orthosteric inhibition of P2X receptors by classical non-ATP-analog antagonists**  
Danqi Sheng<sup>1</sup>, Chenxi Yue<sup>2</sup>  
<sup>1</sup>Fudan University, Shanghai China, <sup>2</sup>China Pharmaceutical University, Nanjing, China
- \*25P-006**     **Ion selectivity mechanism of the MgtE channel for Mg<sup>2+</sup> over Ca<sup>2+</sup>**  
Xinyu Teng<sup>1</sup>, Danqi Sheng<sup>1</sup>, Ye Yu<sup>2</sup>, Jin Wang<sup>2</sup>, Motoyuki Hattori<sup>1</sup>  
<sup>1</sup>Fudan University, Shanghai, China, <sup>2</sup>China Pharmaceutical University, Nanjing, China
- \*25P-007**     **Tracking the glucose/ xylose isomerase mechanism using freezing under high pressure**  
Agnieszka Klonecka<sup>1,2,3</sup>, Joanna Slawek<sup>1</sup>, Philippe Carpentier<sup>4,5</sup>,  
 Christoph Mueller-Dieckmann<sup>4</sup>, Katarzyna Kurpiewska<sup>6</sup>, Maciej Kozak<sup>1,7</sup>  
<sup>1</sup>SOLARIS National Synchrotron Radiation Centre, Kraków, Poland, <sup>2</sup>Faculty of  
 Physics, Astronomy and Applied Computer Science, Jagiellonian University, Kraków,  
 Poland, <sup>3</sup>Doctoral School of Exact and Natural Science, Jagiellonian University,  
 Kraków, Poland, <sup>4</sup>The European Synchrotron Radiation Facility, Grenoble, France,  
<sup>5</sup>Institut de Recherche Interdisciplinaire de Grenoble (IRIG), Laboratoire Chimie et  
 Biologie des Métaux (LCBM), Université Grenoble Alpes, CNRS, CEA, Grenoble,  
 France, <sup>6</sup>Faculty of Chemistry, Jagiellonian University, Kraków, Poland, <sup>7</sup>Department  
 of Biomedical Physics, Faculty of Physics, Adam Mickiewicz University, Poznań,  
 Poland

## Poster Sessions

---

**\*25P-008**      **Structure-activity relationship (SAR) study of hydrophobic moiety of nonsecosteroidal VDR ligands using diphenylsilane scaffold**

Narasinghe Mudiyanse Hansaka Nirupama Thilakarathne<sup>1,2</sup>,  
Takashi Misawa<sup>3</sup>, Yosuke Demizu<sup>3</sup>, Yuya Hanazono<sup>2</sup>, Nobutoshi Ito<sup>2</sup>,  
Hiroyuki Kagechika<sup>1</sup>, Shinya Fujii<sup>1</sup>

<sup>1</sup>Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University,  
<sup>2</sup>Medical Research Institute, Tokyo Medical and Dental University, <sup>3</sup>National Institute  
of Health Sciences

**\*25P-009**      **Structural transformation of a dipeptide Gly-Phe by coffee-ring effect**

Ayaka Sako, Masaki Saito, Kazuo Eda, Atsuo Tamura  
Kobe University, Graduate School of Science

**25P-010**      **Exploring the Continuous Conformational Variability of Glutamate Dehydrogenase Using Cryo-EM Single-particle Images and MD Simulations**

Tingting Wang<sup>1</sup>, Osamu Miyashita<sup>1</sup>, Hideki Shigematsu<sup>2</sup>,  
Masaki Yamamoto<sup>3</sup>, Florence Tama<sup>1,4</sup>

<sup>1</sup>Computational Structural Biology Research Team, R-CCS, RIKEN, Japan, <sup>2</sup>Japan  
Synchrotron Radiation Research Institute (JASRI), SPring-8, Hyogo, Japan, <sup>3</sup>RIKEN  
SPring-8 Center, Hyogo, Japan, <sup>4</sup>Department of Physics and ITbM, Nagoya  
University, Japan

**25P-011**      **Preliminary Cryo-EM study of Arabidopsis Magnesium Transporter MRS2-1**

Hexin Xu<sup>1</sup>, Xinyu Teng<sup>1</sup>, Cheng Shen<sup>1</sup>, Yimeng Zhao<sup>1</sup>, Xiaoyu Yang<sup>2</sup>,  
Natsuko I. Kobayashi<sup>2</sup>, Keitaro Tanoi<sup>2</sup>, Motoyuki Hattori<sup>2</sup>

<sup>1</sup>Fudan University, Shanghai, China, <sup>2</sup>The University of Tokyo, Tokyo, Japan

**25P-012**      **Application of de novo protein design to structural analysis of non-canonical MgtE Mg<sup>2+</sup> channel**

Zhixuan Zhao<sup>1</sup>, Kimiho Omae<sup>2</sup>, Ziyi Zhang<sup>1</sup>, Xinyu Teng<sup>1</sup>, Cheng Shen<sup>1</sup>,  
Danqi Sheng<sup>1</sup>, Wataru Iwasaki<sup>2</sup>, Motoyuki Hattori<sup>1</sup>

<sup>1</sup>Fudan University, Shanghai, China, <sup>2</sup>The University of Tokyo, Tokyo, Japan

**25P-013**      **Native lipid NanoDisc application for structural determination of RND transporter**

Kenta Tsutsumi, Atsushi Nakagawa, Eiki Yamashita

Institute for Protein Research, Osaka, Japan

## Tuesday, June 25

**25P-014 Preliminary cryo-EM study of the MgtE Mg<sup>2+</sup> channel with the PRC-barrel domain**

Ziyi Zhang<sup>1</sup>, Kimiho Omae<sup>2</sup>, Cheng Shen<sup>1</sup>, Wataru Iwasaki<sup>2</sup>,  
Motoyuki Hattori<sup>1</sup>

<sup>1</sup>Fudan University, Shanghai, China, <sup>2</sup>The University of Tokyo, Tokyo, Japan

### Protein: Structure & Function

**\*25P-015 Interpretation of Protein-Corona Formation and Inhibition of Fibrillation by Polyphenol Capped Gold Nanoparticles**

Atanu Singha Roy<sup>1</sup>, Kakali Baruah<sup>1</sup>, Ajit Kumar Singh<sup>2</sup>, Anupam Nath Jha<sup>2</sup>

<sup>1</sup>Department of Chemistry, National Institute of Technology Meghalaya, Shillong 793003, India, <sup>2</sup>Department of Molecular Biology and Biotechnology, Tezpur University, Assam 784028, India

**\*25P-016 CryoEM-sampling of metastable conformations appearing in cofactor-ligand association and catalysis of glutamate dehydrogenase**

Taiki Wakabayashi<sup>1,2</sup>, Mao Oide<sup>3,4</sup>, Masayoshi Nakasako<sup>1,2</sup>

<sup>1</sup>Dept. Phys., Keio Univ., Kanagawa, Japan, <sup>2</sup>RIKEN RSC, Hyogo, Japan, <sup>3</sup>Inst. Prot. Res., Osaka Univ., Osaka, Japan, <sup>4</sup>PRESTO, JST, Tokyo, Japan

**\*25P-017 Coarse-Grained Molecular Dynamics Simulations of Rotational Asymmetry in FOF1 ATPase**

Shintaroh Kubo<sup>1</sup>, Yasushi Okada<sup>1,2</sup>

<sup>1</sup>the University of Tokyo, <sup>2</sup>RIKEN

**\*25P-018 Predicting enzyme function using an empirical approach with machine learning**

Suguru Fujita, Tohru Terada

Graduate School of Agricultural and Life Science, Faculty of Agriculture, The university of Tokyo.

**\*25P-019 Ca<sup>2+</sup>-induced formation of ice-like water network on the surface of type II antifreeze protein from Japanese smelt**

Tatsuya Arai<sup>1,2</sup>, Yue Yang<sup>1</sup>, Sakae Tsuda<sup>1</sup>, Kazuhiro Mio<sup>2</sup>, Yuji Sasaki<sup>1,2</sup>

<sup>1</sup>Graduate School of Frontier Sciences, The University of Tokyo, <sup>2</sup>AIST-UTokyo Advanced Operando-Measurement Technology Open Innovation Laboratory (OPERANDO-OIL)

## Poster Sessions

---

- \*25P-020** **Predicting protein conformational motions with AlphaFold2 dictated by physical energy landscape**  
Xingyue Guan<sup>1,2</sup>, Qianyuan Tang<sup>3</sup>, Weitong Ren<sup>2</sup>, Wenfei Li<sup>1,2</sup>, Wei Wang<sup>1</sup>  
<sup>1</sup>Department of Physics, National Laboratory of Solid State Microstructure, Nanjing University, Nanjing 210093, China, <sup>2</sup>Wenzhou Key Laboratory of Biophysics, Wenzhou Institute, University of Chinese Academy of Sciences, Wenzhou, Zhejiang 325000, China, <sup>3</sup>Department of Physics, Hong Kong Baptist University, 224 Waterloo Road, Kowloon Tong, Hong Kong SAR, China
- \*25P-021** **Thermodynamic insights into the anti-amyloid activity of lobeline on lysozyme fibrillation**  
Vibeizonuo Rupreo<sup>1</sup>, Jhimli Bhattacharyya<sup>1</sup>, Ria Saha<sup>2</sup>, Rajib Kumar Mitra<sup>2</sup>  
<sup>1</sup>Department of Chemistry, National Institute of Technology Nagaland, Dimapur, Nagaland - 797103, India, <sup>2</sup>Department of Chemical and Biological Sciences, S.N. Bose National Centre for Basic Sciences, Kolkata - 700106, West Bengal, India
- \*25P-022** **Functional mechanism of a short wavelength absorbing cation channelrhodopsin, KnChR**  
Koki Natsume<sup>1</sup>, Shoko Hososhima<sup>1,2</sup>, Yuzhu Wang<sup>3</sup>, Tatsuki Tanaka<sup>3</sup>, Wataru Shihoya<sup>3</sup>, Osamu Nureki<sup>3</sup>, Hideki Kandori<sup>1,2</sup>, Satoshi Tsunoda<sup>1,2</sup>  
<sup>1</sup>Nagoya Institute of Technology, <sup>2</sup>Opto-Biotechnology Research Center, <sup>3</sup>The University of Tokyo
- \*25P-023** **Structural basis of inhibition and transport in Organic Cation Transporter 1**  
Yi Cheng Zeng<sup>1,2</sup>, Meghna Sobti<sup>1,2</sup>, Ada Quinn<sup>3</sup>, Esther Kristianto<sup>4</sup>, Simon Brown<sup>5</sup>, Nicola Smith<sup>6</sup>, Jamie Vandenberg<sup>2,7</sup>, Renae Ryan<sup>8</sup>, Alastair Stewart<sup>1,2</sup>  
<sup>1</sup>Molecular, Structural and Computational Biology Division, The Victor Chang Cardiac Research Institute, Darlinghurst, NSW, Australia, <sup>2</sup>School of Clinical Medicine, Faculty of Medicine and Health, UNSW Sydney, Sydney, NSW, Australia, <sup>3</sup>Australian Institute of Bioengineering and Nanotechnology, University of Queensland, Brisbane, QLD, Australia, <sup>4</sup>Freedman Foundation Metabolomics Facility, The Victor Chang Cardiac Research Institute, Darlinghurst, NSW, Australia, <sup>5</sup>School of Chemistry and Molecular Bioscience, Molecular Horizons, and Australian Research Council Centre for Cryo-electron Microscopy of Membrane Proteins, University of Wollongong, Wollongong, NSW, Australia, <sup>6</sup>School of Biomedical Sciences, Faculty of Medicine & Health, UNSW Sydney, Kensington, NSW, Australia, <sup>7</sup>Molecular Cardiology and Biophysics Division, The Victor Chang Cardiac Research Institute, Darlinghurst, NSW, Australia, <sup>8</sup>School of Medical Sciences, Faculty of Medicine and Health, University of Sydney, Sydney, NSW, Australia

**Tuesday, June 25**

- \*25P-024** **Rational Design of High-Affinity Protein Binders by Side Chain Dihedral Correlation Network**  
Yun-Jung Hsieh<sup>1,2</sup>, Ta I Hung<sup>3,4</sup>, Wei-Lin Lu<sup>1</sup>, Chia-en Chang<sup>3,4</sup>, Kuen-Phon Wu<sup>1,2</sup>  
<sup>1</sup>Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan, <sup>2</sup>Institute of Biochemical Sciences, National Taiwan University, Taipei, Taiwan, <sup>3</sup>Department of Chemistry, University of California, Riverside, United States, <sup>4</sup>Department of Bioengineering, University of California, Riverside, United States
- \*25P-025** **Cytoplasmic domain of GtACR1 regulations the channel gating.**  
Hana Maruyama<sup>1</sup>, Shoko Hososhima<sup>1</sup>, Satoshi Tsunoda<sup>1,2</sup>, Yuya Ohki<sup>3</sup>, Takashi Kikukawa<sup>3,4</sup>, Takashi Tsukamoto<sup>3,4</sup>, Hideki Kandori<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, <sup>2</sup>Opto Bio Technology Research Center, <sup>3</sup>Graduate School of Life Science, Hokkaido University, <sup>4</sup>Faculty of Advanced Life Science, Hokkaido University
- \*25P-026** **Beyond the Active site: The addition of a remote loop reveals a new complex biological function for chitinase enzymes**  
Dan Kozome<sup>1</sup>, Adnan Sijoka<sup>2,3</sup>, Paola Laurino<sup>1</sup>  
<sup>1</sup>Protein Engineering and Evolution Unit, Okinawa Institute of Science and Technology Graduate University, Okinawa, Japan, <sup>2</sup>Center for Advanced Intelligence Project, RIKEN, <sup>3</sup>York University, Canada
- \*25P-027** **Towards the Cryo-EM Structures of Viral Annealase Proteins**  
Lucy Johanna Fitschen<sup>1,2</sup>, Jodi Brewster<sup>1,2</sup>, Jordan Nicholls<sup>1,2</sup>, Stefan Mueller<sup>1</sup>, Gökhan Tolun<sup>1,2</sup>  
<sup>1</sup>School of Chemistry and Molecular Bioscience, and Molecular Horizons, University of Wollongong, Wollongong, Australia, <sup>2</sup>ARC Industrial Transformation Training Centre for Cryo-electron Microscopy of Membrane Proteins (CCeMMP)
- \*25P-028** **Targeting the oncoprotein GOLPH3**  
Anastasia Theodoropoulou<sup>1</sup>, Luciano Abriata<sup>1</sup>, Anita Nasrallah<sup>2</sup>, Francesco Talotta<sup>2</sup>, Sarah Vacle<sup>1</sup>, Fernando Meireles<sup>1</sup>, Maria J. Marcaida<sup>1</sup>, Giovanni D'Angelo<sup>2</sup>, Matteo Dal Peraro<sup>1</sup>  
<sup>1</sup>Laboratory for Biomolecular Modeling, Institute of Bioengineering, EPFL, Switzerland, <sup>2</sup>Lipid Cell Biology Laboratory, Institute of Bioengineering, EPFL, Switzerland

## Poster Sessions

---

- 25P-029** IgG subclass oligomerization upon antigen binding – Full biophysical characterization of the missing link between antibody binding and complement activation  
Jürgen Strasser<sup>1</sup>, Nikolaus Frischauf<sup>1</sup>, Aran F. Labrijn<sup>2</sup>, Frank J. Beurskens<sup>2</sup>, Johannes Preiner<sup>1</sup>  
<sup>1</sup>University of Applied Sciences Upper Austria, Linz, Austria, <sup>2</sup>Genmab, Utrecht, Netherlands
- 25P-030** Regulation of enzyme structure and function by weak metal-ion binding  
Masayuki Oda<sup>1</sup>, Yumi Kitagawa<sup>1</sup>, Takuji Oyama<sup>2</sup>, Kosuke Morikawa<sup>1</sup>  
<sup>1</sup>Kyoto Prefectural University, <sup>2</sup>University of Yamanashi
- 25P-031** Structure and function of stomatin-like protein FliL to assist flagellar motor stator PomAB in marine *Vibrio*  
Norihiro Takekawa<sup>1</sup>, Tatsuro Nishikino<sup>2</sup>, Ray Burton-Smith<sup>3</sup>, Yuki Tajimi<sup>4</sup>, Mitsuru Ikeda<sup>3</sup>, Kazuyoshi Murata<sup>3</sup>, Seiji Kojima<sup>5</sup>, Takayuki Uchihashi<sup>4</sup>, Katsumi Imada<sup>1</sup>, Michio Homma<sup>4</sup>  
<sup>1</sup>Dep Macromol Sci, Grad Sch Sci, Osaka Univ, <sup>2</sup>Dep Life Sci Appl Chem, Nagoya Inst Tech, <sup>3</sup>ExCELLS, Nat Inst Nat Sci, <sup>4</sup>Div Material Sci, Grad Sch Sci, Nagoya Univ, <sup>5</sup>Div Biol Sci, Grad Sch Sci, Nagoya Univ
- 25P-032** Factors influencing pH-sensitive color changes in firefly bioluminescence were studied through computational analysis of hydrogen bond networks in close proximity to catalytic centers of luciferase and its mutants using QM/MM  
Kota Nosaka<sup>1</sup>, Naohisa Wada<sup>2</sup>  
<sup>1</sup>Graduate School of Life Sciences, Toyo University, Gunma, Japan, <sup>2</sup>kyoto Luminous Science Laboratory, Kyoto, Japan
- 25P-033** A double-edged sword: Bacteriophage PlyGRCS endolysin targeting MRSA *Staphylococcus aureus* isolates and serendipitous discovery of its interaction with a cold shock protein C (CspC)  
Padmanabhan Balasundaram  
Department of Biophysics, National Institute of Mental Health and Neuro Sciences (NIMHANS)

**25P-034**      **Deciphering Protein Dynamics and Evolution: Insights from AlphaFold 2's Predicted Aligned Error**

Qian-Yuan Tang<sup>1</sup>, Liangxu Xie<sup>2</sup>, Xiangze Zeng<sup>1</sup>

<sup>1</sup>Hong Kong Baptist University, Hong Kong, China, <sup>2</sup>Jiangsu University of Technology, China

**25P-035**      **Conformational Heterogeneity and Fluorescence Resonance Energy Transfer in the Calcium Indicator Yellow Cameleon YC3.60**

Hiroki Tsubota, Yuna Kinoshita, Mamoru Shigeno, Haruko Hosoi

Toho University

**25P-036**      **Protein Dynamics and Mechanisms from Multiple Structures**

Robert L Jernigan, Mesih Kilinc, Kejue Jia, Weixia Deng, Pradeep Bk, Rthan Bush

Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University, Ames, IA, USA

## Protein: Physical property

**\*25P-037**      **Role of aggregation-prone segments in fibril formation of the amyloidogenic apolipoprotein A-I variant**

Norihiro Namba<sup>1</sup>, Takashi Ohgita<sup>1</sup>, Hiroko Tamagaki-Asahina<sup>2</sup>, Toshinori Shimanouchi<sup>3</sup>, Takeshi Sato<sup>2</sup>, Hiroyuki Saito<sup>1</sup>

<sup>1</sup>Laboratory of Biophysical Chemistry, Kyoto Pharmaceutical University, <sup>2</sup>Division of Liberal Arts Sciences, Kyoto Pharmaceutical University, <sup>3</sup>Graduate School of Environmental and Life Science, Okayama University

**\*25P-038**      **Feasibility of immunoglobulin A purification using phosphate-modified zirconia particles**

Shogo Kanoh<sup>1,2</sup>, Kentaro Shiraki<sup>1</sup>, Katsuya Kato<sup>3</sup>, Atsushi Hirano<sup>2</sup>

<sup>1</sup>Faculty of Pure and Applied Sciences, University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki 305-8573, Japan, <sup>2</sup>Nanomaterials Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki 305-8565, Japan, <sup>3</sup>Chubu Center, National Institute of Advanced Industrial Science and Technology (AIST), Nagoya, Aichi 463-8560, Japan

## Poster Sessions

---

---

**\*25P-039**    **Development of a high-throughput data collecting system for antibody optimization: thermal stability and interaction kinetics**  
Sae Ito<sup>1</sup>, Ryo Matsunaga<sup>1</sup>, Makoto Nakakido<sup>1</sup>, Daisuke Komura<sup>2</sup>, Hiroto Katoh<sup>2</sup>, Shumpei Ishikawa<sup>2</sup>, Kouhei Tsumoto<sup>1,3</sup>  
<sup>1</sup>Department of Bioengineering, School of Engineering, The University of Tokyo.,  
<sup>2</sup>Department of Preventive Medicine, Graduate School of Medicine, The University of Tokyo.,  
<sup>3</sup>Department of Chemistry and Biotechnology, School of Engineering, The University of Tokyo.

**\*25P-040**    **Air/water-interface-induced self-assembly of biosurfactant protein RoIA from filamentous fungus *Aspergillus oryzae***  
Nao Takahashi<sup>1</sup>, Yuki Terauchi<sup>2</sup>, Takumi Tanaka<sup>3</sup>, Akira Yoshimi<sup>4</sup>, Hiroshi Yabu<sup>5</sup>, Keietsu Abe<sup>1</sup>  
<sup>1</sup>Grad. Sch. Agric. Sci., Tohoku Univ, Sendai, Japan, <sup>2</sup>RCTMR, Yamaguchi Univ. Yamaguchi, Japan, <sup>3</sup>Grad. Sch. Eng., Osaka Univ. Osaka, Japan, <sup>4</sup>Grad. Sch. Glob. Env. Stud., Kyoto Univ. Kyoto, Japan, <sup>5</sup>WPI-AIMR, Tohoku Univ. Sendai, Japan

**\*25P-041**    **pKa, stretching vibrational frequencies, and nuclear magnetic resonance chemical shifts in H-bond networks of protein environments**  
Masaki Tsujimura<sup>1</sup>, Keisuke Saito<sup>1,2</sup>, Hiroshi Ishikita<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan

**25P-042**    **The common feature of fibril formation mechanism of  $\alpha$ -synuclein and apolipoprotein A-I**  
Takashi Ohgita, Norihiro Namba, Hiroki Kono, Hiroyuki Saito  
Kyoto Pharmaceutical University

### Protein: Function

**\*25P-043**    **Regulatory mechanism of HADH and its localization in cell organelles during temperature acclimation in *Caenorhabditis elegans***  
Yukina Mori<sup>1</sup>, Misaki Okahata<sup>1</sup>, Akihisa Fukumoto<sup>1</sup>, Yohei Minakuchi<sup>2</sup>, Atsushi Toyoda<sup>2</sup>, Akane Ohta<sup>1</sup>, Atushi Kuhara<sup>1,3</sup>  
<sup>1</sup>Faculty of Science and Engineering Konan University & Institute for Integrative Neurobiology, Kobe, Japan, <sup>2</sup>National Institute of Genetics, <sup>3</sup>PRIME, AMED



**\*25P-045 Proposed design of kinetic parameters for agonist antibodies that induce OX40 clustering.**

Kan Ujiie<sup>1</sup>, Aki Tanabe<sup>2</sup>, Satoru Nagatoishi<sup>3</sup>, Ryo Matsunaga<sup>1,4</sup>, Kouhei Tsumoto<sup>1,4,5</sup>

<sup>1</sup>Department of Bioengineering, School of Engineering, The University of Tokyo, Japan, <sup>2</sup>AIDS Research Center, National Institute of Infectious Diseases, Japan, <sup>3</sup>Medical Device Development and Regulation Research Center, School of Engineering, The University of Tokyo, Japan, <sup>4</sup>Department of Chemistry & Biotechnology, School of Engineering, The University of Tokyo, Japan, <sup>5</sup>Institute of Medical Science, The University of Tokyo, Japan

**\*25P-046 In vitro assembly of a protein capsule and cargo molecules into virus-like particles.**

Kenya Tajima<sup>1</sup>, Yusuke Sakai<sup>2</sup>, Naohiro Terasaka<sup>1</sup>

<sup>1</sup>Earth-Life Science Institute, Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>Center for Biosystems Dynamics Research, RIKEN, Osaka, Japan

**25P-047 FHL complex as a cell strategy to regulate proton motive force and survive under energy limited fermentative conditions**

Heghine Gevorgyan, Anna Poladyan, Anait Vassilian, Karen Trchounian  
Laboratory of Microbiology, Bioenergetics and Biotechnology, Research Institute of Biology, Yerevan State University

**25P-048 Regulation Mechanism of Liquid-Liquid Phase Separation and Following Aggregation of Fused in Sarcoma by RNA Revealed by Raman Microscopy**

Shinya Tahara, Uchu Matsuura, Shinji Kajimoto, Takakazu Nakabayashi  
Graduate School of Pharmaceutical Sciences, Tohoku University

**Protein: Measurement & Analysis****\*25P-049 Platinum (II) stabilizes a molten-globule conformation of a small globular cytosolic protein**

Suman Tiwari, A.S.R. Koti

Department of Chemical Sciences, TIFR, Mumbai, India.

**\*25P-050 Visualization and quantitative analysis of protein-protein interaction and cell fusion events using split Akaluc complementation in deep tissues**

Yiling Li, Genki Kawamura, Qiaojing Li, Takeaki Ozawa

Department of Chemistry, School of Science, The University of Tokyo, Japan

## Poster Sessions

---

---

- \*25P-051** Time-resolved study of the interaction mechanism between  $\alpha$ 1-acid glycoprotein and membrane by vacuum-ultraviolet circular-dichroism spectroscopy  
Satoshi Hashimoto<sup>1</sup>, Koichi Matsuo<sup>1,2</sup>  
<sup>1</sup>Graduate School of Advanced Science and Engineering, Hiroshima University, <sup>2</sup>Hiroshima Synchrotron Radiation center, Hiroshima University
- 25P-052** Real-time Visualization of Structural Maintenance of Chromosomes Complexes by High-Speed Atomic Force Microscopy  
Kenichi Umeda<sup>1,2</sup>, Yumiko Kurokawa<sup>3</sup>, Yasuto Murayama<sup>3</sup>, Noriyuki Kodera<sup>1</sup>  
<sup>1</sup>Nano Life Science Institute, Kanazawa University, Japan, <sup>2</sup>PRESTO/JST, Japan, <sup>3</sup>Department of Chromosome Science, National Institute of Genetics, Japan
- 25P-053** Sensitivity of various occupancy estimation for synthetic data related to time-resolved serial femtosecond crystallography.  
Sriram Srinivasa Raghavan<sup>1</sup>, Florence Tama<sup>1,2,3</sup>, Osamu Miyashita<sup>1</sup>  
<sup>1</sup>RIKEN Center for Computational Science, Kobe, Japan., <sup>2</sup>Institute of Transformative Biomolecules (WPI-ITbM), Nagoya University, Aichi, Japan., <sup>3</sup>Department of Physics, Graduate School of Science, Nagoya University, Aichi, Japan.
- 25P-054** A state of partial Rb inactivation and intermediate E2F activation safeguards proliferation commitment  
Yumi Konagaya  
RIKEN Center for Biosystems Dynamics Research
- 25P-055** Real-time HS-AFM observation of EEA1-mediated vesicle fusion in the absence of canonical regulators  
Tareq Omer Mohammed, Prem Babu, Shingo Fukuda, Toshio Ando  
Nano Life Science Institute, Kanazawa University, Kakuma-machi, Kanazawa 920-1192, Japan

### Protein: Design & Engineering

- \*25P-056** PMBiT: A Bioluminescent Probe for Large Antigen Detection  
Cheng Qian<sup>1</sup>, Ayumu Ninomiya<sup>1</sup>, Natsuki Shibukawa<sup>1</sup>, Hiroshi Ueda<sup>2</sup>, Takanobu Yasuda<sup>2</sup>, Bo Zhu<sup>2</sup>, Tetsuya Kitaguchi<sup>2</sup>  
<sup>1</sup>Graduate School of Life Science and Technology, Tokyo Institute of Technology, Kanagawa, Japan, <sup>2</sup>Laboratory for Chemistry and Life Science, Tokyo Institute of Technology, Kanagawa, Japan

## Tuesday, June 25

- \*25P-057**     **Stabilizing Talin R3 in its Folded State: De Novo Design of a Peptide Binder as a Molecular Lock**  
Yuze Sun, Jie Yan  
 National university of singapore mechanobiology institute
- \*25P-058**     **Hibody: A Bioluminescent Immunosensor Based on “Trap & Release” of Luciferase-derived Peptide Fused to Antibody**  
Takanobu Yasuda, Bo Zhu, Hiroshi Ueda, Tetsuya Kitaguchi  
 Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Kanagawa, Japan
- \*25P-059**     **Increased reaction efficiency by external stimuli-sensitive linker**  
Momoka Takazawa, Koki Kamiya  
 Graduate School of Science and Technology, Gunma University, Kiryu, Gunma, Japan
- \*25P-060**     **Design of Proteins that adopt interconvertible two distinct functional conformations**  
Toma Ikeda<sup>1</sup>, Tatsuya Nojima<sup>2</sup>, Hideki Taguchi<sup>1,2</sup>  
<sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, Japan,  
<sup>2</sup>Institute of Innovative Research, Tokyo Institute of Technology, Japan
- \*25P-061**     **The symmetric SAKe protein scaffold**  
Staf Wouters<sup>1</sup>, Andreu Mor Maldonado<sup>2</sup>, Hiroki Noguchi<sup>1</sup>, Kenichi Kamata<sup>1</sup>, Wim Maes<sup>3</sup>, Karen Vanhoorelbeke<sup>3</sup>, Jeremy Tame<sup>4</sup>, Steven De Feyter<sup>2</sup>, Arnout Voet<sup>1</sup>  
<sup>1</sup>Laboratory for Biomolecular Modeling and Design, KU Leuven, Heverlee, Belgium,  
<sup>2</sup>Division of Molecular Imaging and Photonics, KU Leuven, Heverlee, Belgium,  
<sup>3</sup>Laboratory for Thrombosis Research, KU Leuven, Kortrijk, Belgium, <sup>4</sup>Protein Design Laboratory, Yokohama City University, Yokohama, Japan
- \*25P-062**     **Characterization of novel scFv×VHH format of biparatopic antibody against MtsA from Streptococcus pyogenes**  
Risa Asano<sup>1</sup>, Miyu Takeuchi<sup>1</sup>, Makoto Nakakido<sup>1</sup>, Chihiro Aikawa<sup>2</sup>, Takeshi Yokoyama<sup>3</sup>, Yoshikazu Tanaka<sup>3</sup>, Ichiro Nakagawa<sup>2</sup>, Kouhei Tsumoto<sup>1,4,5</sup>  
<sup>1</sup>Dept of Bioeng.Eng., Sch. of Eng., The Univ of Tokyo, <sup>2</sup>Dept. of Microbiol., Sch. of Med., Kyoto Univ, <sup>3</sup>Grad.Sch.of Life Sci., Tohoku Univ, <sup>4</sup>Dept. of Chem. Biotech., Sch. of Eng., The Univ of Tokyo, <sup>5</sup>Inst. of Med. Sci., The Univ of Tokyo
- 25P-063**     **Functional protein complexes from symmetric designer proteins**  
Arnout RD Voet, Staf Wouters, Bram Mylemans, Hiroki Noguchi  
 KU Leuven, Belgium

# Poster Sessions

---

---

**25P-064**      **Development of a general methodology to design sensor proteins**

Rie Tatsumi, Nobuyasu Koga

Institute for Protein Research (IPR), Osaka University, Osaka, Japan

**25P-065**      **A one-pot detection system using  $\beta$ -glucuronidase-based enzyme switch and label-free antibody**

Bo Zhu<sup>1</sup>, Yukihiko Yamasaki<sup>2</sup>, Takanobu Yasuda<sup>1</sup>, Cheng Qian<sup>3</sup>,  
Zhirou Qiu<sup>3</sup>, Hiroshi Ueda<sup>1</sup>, Tetsuya Kitaguchi<sup>1</sup>

<sup>1</sup>Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Yokohama, Japan, <sup>2</sup>BioDynamics Laboratory Inc., Tokyo, Japan, <sup>3</sup>Graduate School of Life Science and Technology, Tokyo Institute of Technology, Yokohama, Japan

## Protein: Intrinsic disorder

**\*25P-066**      **The Relationship between Self-assembly and Local Dynamics of Intrinsically Disordered Proteins**

Ryoga Kobayashi<sup>1</sup>, Takashi S. Kodama<sup>2</sup>, Norio Yoshida<sup>3</sup>,  
Hideki Nakamura<sup>4,5</sup>, Yohei Miyanoiri<sup>2</sup>, Hidehito Tochio<sup>1</sup>, Naotaka Sekiyama<sup>1</sup>

<sup>1</sup>Department of Biophysics, Graduate School of Science, Kyoto University, Kyoto, Japan, <sup>2</sup>Institute for Protein Research, Osaka University, Osaka, Japan, <sup>3</sup>Department of Complex systems science, Graduate School of Informatics, Nagoya University, Nagoya, Japan, <sup>4</sup>Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan, <sup>5</sup>Hakubi Center for Advanced Research, Kyoto University, Kyoto, Japan

**\*25P-067**      **Interaction Mechanism of  $\alpha$ -Synuclein with Synapsin in the Liquid Condensates**

Shunki Takaramoto, Keiichi Inoue

The Institute for Solid State Physics, University of Tokyo, Kashiwa, Japan

**25P-068**      **Global Analysis of Disordered Proteome in Cells**

Shouxiang Zhang, Tze Cin Owyong, Yuning Hong

La Trobe University, Melbourne, Australia

## Heme proteins

**\*25P-069** Crystal structures of bovine heart cytochrome c oxidase with inhibitor complexTomohiro Ide<sup>1</sup>, Kyoko Shinzawa-Itoh<sup>2</sup>, Kazumasa Muramoto<sup>2</sup><sup>1</sup>School of Science, University of Hyogo, Hyogo, Japan., <sup>2</sup>Graduate School of Science, University of Hyogo, Hyogo, Japan.**25P-070** Gold Nanoparticle Thin Film Electrode Enables Direct Electrochemical Control of Cytochrome P450 ReactionYasuhiro Mie<sup>1</sup>, Chitose Mikami<sup>1</sup>, Yoshiaki Yasutake<sup>2</sup>, Naoki Matsuda<sup>3</sup><sup>1</sup>Bioproduction Research Institute, AIST, <sup>2</sup>CBBD-OIL, AIST-Waseda Univ., <sup>3</sup>Sensing System Research Center, AIST

## Membrane proteins

**\*25P-071** Engineering cardiolipin binding to an artificial membrane protein reveals determinants for lipid-mediated stabilizationMia Louis Abramsson<sup>1</sup>, Robin A Corey<sup>2</sup>, Jan Škerle<sup>3,4</sup>, Louise Persson<sup>5</sup>, Olivia Andén<sup>6</sup>, Abraham O Oluwole<sup>7</sup>, Rebecca J Howard<sup>6</sup>, Erik Lindahl<sup>6</sup>, Carol V Robinson<sup>7</sup>, David Drew<sup>3</sup>, Kvido Strisovsky<sup>4</sup>, Erik G Marklund<sup>5</sup>, Phillip J Stansfeld<sup>8</sup>, Michael Landreh<sup>1,9</sup><sup>1</sup>Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden, <sup>2</sup>School of Physiology, Pharmacology & Neu, University of Bristol, Bristol, UK, <sup>3</sup>Department of Biochemistry and Biophysics, Stockholm University, Stockholm, Sweden, <sup>4</sup>Institute of Organic Chemistry and Biochemistry, Czech Academy of Science, Prague, Czech Republic, <sup>5</sup>Department for Cell and Molecular Biology, Uppsala University, Uppsala, Sweden, <sup>6</sup>Department of Biochemistry and Biophysics, Stockholm University SciLifeLab, Solna, Sweden, <sup>7</sup>Department of Chemistry & Kavli Institute for Nanoscience Discovery, University of Oxford, Oxford, UK, <sup>8</sup>School of Life Sciences & Chemistry, University of Warwick, Coventry UK, <sup>9</sup>Department for Cell and Molecular Biology, Uppsala University, Sweden.**\*25P-072** Identification of Novel Receptor for Polyphenolic MetabolitesShota Nishikawa<sup>1</sup>, Yuki Masujima<sup>1</sup>, Ryuji Ohue-Kitano<sup>1,2,3</sup>, Ikuo Kimura<sup>1,2</sup><sup>1</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan, <sup>2</sup>Graduate School of Biostudies, Kyoto University, Kyoto, Japan, <sup>3</sup>Graduate School of Biostudies and Center for Living Systems Information Science (CeLiSIS), Kyoto University, Kyoto, Japan

# Poster Sessions

---

- \*25P-073**    **Mechanism of caffeine-induced functional recovery in RyR2 loss-of-function mutant**  
Yuya Otori<sup>1</sup>, Raymond Burton-Smith<sup>2</sup>, Nagomi Kurebayashi<sup>3</sup>, Kazuyoshi Murata<sup>2</sup>, Hiroaki Kato<sup>1,4</sup>, Takashi Murayama<sup>3</sup>, Haruo Ogawa<sup>1</sup>  
<sup>1</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, <sup>2</sup>Exploratory Research Center on Life and Living Systems, <sup>3</sup>Juntendo University Graduate School of Medicine, <sup>4</sup>RIKEN SPring-8 Center
- \*25P-074**    **A proton-transfer mechanism in the malaria parasite lactate/H<sup>+</sup> symporter suggests a transporter without conformational changes**  
Ciara J F Wallis, Kasimir Gregory, Stephen Fairweather, Ruitao Jin, Sitong He, Giel van Dooren, Adele Lehane, Ben Corry  
Research School of Biology, The Australian National University, Canberra, Australia
- \*25P-075**    **Ligand binding mechanism analysis of muscarinic acetylcholine receptors utilizing vibrational spectroscopy**  
Moeka Mizuno<sup>1</sup>, Yuya Sugiura<sup>1</sup>, Ryoji Suno<sup>3</sup>, Hideki Kandori<sup>1,2</sup>, Kota Katayama<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, Aichi, Japan, <sup>2</sup>OptoBio Technology Research Center, Aichi, Japan, <sup>3</sup>Department of Medical Chemistry, Kansai Medical University, Osaka, Japan
- 25P-076**    **Structural dynamics of potassium ion selective and cyclic nucleotide binding in a CNG channel SthK using ATR-FTIR**  
Tatsuro Nishikino<sup>1</sup>, Hiroto Fukuda<sup>2</sup>, Koki Ogasawara<sup>2</sup>, Yuji Furutani<sup>1,3</sup>  
<sup>1</sup>Grad. Sch. of Eng., Nagoya Inst. of Tech., Aichi, Japan., <sup>2</sup>Sch. of Eng., Nagoya Inst. of Tech., Aichi, Japan., <sup>3</sup>OptoBioTech. Res. Cent., Nagoya Inst. of Tech., Aichi, Japan.
- 25P-077**    **Where is the N-tail? A Computational Study of Intrinsically Disordered Regions of Human ATP-sensitive Potassium Channel**  
Katarzyna Walczewska-Szewc, Wieslaw Nowak  
Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Torun, ul. Grudziadzka 5, 87-100 Torun, Poland
- 25P-078**    **A Novel Gate Operation Pathway of Lipopolysaccharide Transport by Bacterial ABC Transporter MsbA and LptC**  
Kien Xuan Ngo, Toshio Ando  
Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kanazawa, Japan

**Tuesday, June 25**

- 25P-079** **Pulmonary Surfactant Protein C (SP-C): The role of palmitoyl chains on protein-protein interaction and oligomerization, from time-resolved fluorescence methodologies**  
Manuel Prieto<sup>2,3</sup>, Michelle Morán-Lalangui<sup>1</sup>, Ana Coutinho<sup>2,3,4</sup>,  
 Jesús Pérez-Gil<sup>1</sup>, Luís M. S. Loura<sup>5,6,7</sup>, Begoña García-Álvarez<sup>1</sup>  
<sup>1</sup>1 Depart. of Biochem. and Mol. Biology, Faculty of Biology, Complutense University, Madrid, Spain, <sup>2</sup>2 Univ Lisbon, IBB Inst Bioengn & Biosci, Inst Super Tecn, P-1049001 Lisbon, Portugal, <sup>3</sup>3 Univ Lisbon, Associate Lab I4HB, Inst Hlth & Bioecon, Inst Super Tecn, P-1049001 Lisbon, Portugal, <sup>4</sup>4 Univ Lisbon, Fac Sci, Dept Quim & Bioquim, P-1749016 Lisbon, Portugal, <sup>5</sup>5 Univ Coimbra, Inst Mol Sci CQC IMS, Coimbra Chem Ctr, Dept Chem, P-3004535 Coimbra, Portugal, <sup>6</sup>6 Univ Coimbra, CNC Ctr Neurosci & Cell Biol, P-3004535 Coimbra, Portugal, <sup>7</sup>7 Univ Coimbra, Fac Pharm, P-3000548 Coimbra, Portugal

**DNA & DNA binding proteins**

- \*25P-080** **Single molecule imaging of DNA higher-order structural formation by human transcription factor Yin Yang 1.**  
Yan Xi, Takada Shoji, Terakawa Tsuyoshi  
 Graduate School of science, Kyoto University, Kyoto, Japan
- \*25P-081** **Differential dynamics specify MeCP2 function at nucleosomes and methylated DNA**  
Gabriella N.L. Chua<sup>1,2</sup>, John Watters<sup>1</sup>, Paul Dominic Olinares<sup>3</sup>, Joshua Luo<sup>1</sup>, Brian Chait<sup>3</sup>, Shixin Liu<sup>1</sup>  
<sup>1</sup>Laboratory of Nanoscale Biophysics and Biochemistry, The Rockefeller University, New York, NY, USA, <sup>2</sup>Tri-Institutional PhD Program in Chemical Biology, New York, NY, USA, <sup>3</sup>Laboratory of Mass Spectrometry and Gaseous Ion Chemistry, The Rockefeller University, New York, NY, USA
- 25P-082** **Mediator Mei5-Sae3 Stabilizes Dmc1 Recombinase Clusters for Efficient Assembly on RPA-Coated Single-Stranded DNA**  
Hung-Wen Li<sup>1</sup>, Chin-Dian Wei<sup>1</sup>, Hao-Yen Chang<sup>1,2</sup>, Chia-Hua Lu<sup>1</sup>, Chih-Chun Chang<sup>2</sup>, Asako Furukohri<sup>3</sup>, Akira Shinohara<sup>3</sup>, Peter Chi<sup>2,4</sup>  
<sup>1</sup>Department of Chemistry, National Taiwan University, Taiwan, <sup>2</sup>Institute of Biochemical Sciences, National Taiwan University, Taiwan, <sup>3</sup>Institute for Protein Research, Osaka University, Suita, Osaka, Japan, <sup>4</sup>Institute of Biological Chemistry, Academia Sinica, Taiwan

# Poster Sessions

## RNA & RNA binding proteins

### **\*25P-083 Molecular mechanisms of interaction between RNase I and ribosomes**

Atsushi Minami<sup>1</sup>, Takehito Tanzawa<sup>2</sup>, Zhuohao Yang<sup>3</sup>, Takashi Funatsu<sup>3</sup>, Takayuki Kato<sup>2</sup>, Tomohisa Kuzuyama<sup>1,5</sup>, Hideji Yoshida<sup>4</sup>, Tetsuhiro Ogawa<sup>1,5</sup>

<sup>1</sup>Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Institute for Protein Research, Osaka University, Osaka, Japan, <sup>3</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Faculty of Medicine, Osaka Medical and Pharmaceutical University, Osaka, Japan, <sup>5</sup>Collaborative Research Institute for Innovative Microbiology, The University of Tokyo, Tokyo, Japan

### **25P-084 Nascent pre-ribosomal RNA acts as surfactants that suppress fusion of fibrillar centers in nucleolus**

Tetsuya Yamamoto<sup>1</sup>, Tomohiro Yamazaki<sup>2</sup>, Kensuke Ninomiya<sup>2</sup>, Tetsuro Hirose<sup>2</sup>

<sup>1</sup>Institute for Chemical Reaction Design and Discovery, Hokkaido University, <sup>2</sup>Department of Frontier Biosciences, Osaka University

## DNA/RNA nanotechnology

### **\*25P-085 Agent model for numerical simulation of the DNA active droplet**

Kei Goraku<sup>1</sup>, Ryohei Furuichi<sup>1</sup>, Masahiro Takinoue<sup>1,2</sup>

<sup>1</sup>Department of Computer Science, Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>Living Systems Materialogy (LiSM), Tokyo Institute of Technology, Tokyo, Japan

### **\*25P-086 Construction of DNA droplets capable of autonomously moving by sensing nucleic acids**

Kanta Takagi<sup>1</sup>, Tomoya Maruyama<sup>2</sup>, Masahiro Takinoue<sup>1,2,3</sup>

<sup>1</sup>Department of Computer Science, Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>Department of Life Science and Technology, Tokyo Institute of Technology, Tokyo, Japan, <sup>3</sup>Living Systems Materialogy (LiSM), Tokyo Institute of Technology, Tokyo, Japan

### **\*25P-087 Specific cell binding of functionalized DNA droplets**

Ryoya Hasegawa<sup>1</sup>, Jing Gong<sup>1</sup>, Shin-Ichiro M. Nomura<sup>2</sup>, Masahiro Takinoue<sup>1,3,4</sup>

<sup>1</sup>Department of Life Science and Technology, Tokyo Institute of Technology, <sup>2</sup>Department of Robotics, Graduate School of Engineering, Tohoku University, <sup>3</sup>Department of Computer Science, Tokyo Institute of Technology, <sup>4</sup>Living Systems Materialogy Research Group, International Research Frontiers Initiative



## Tuesday, June 25

**\*25P-088**     **DNA droplets based on self-assembled DNA nanostructure polymers with programmable multivalency**

[Naoki Yoshida](#)<sup>1</sup>, Masahiro Takinoue<sup>2</sup>

<sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, Yokohama, Japan, <sup>2</sup>School of Computing, Tokyo Institute of Technology, Yokohama, Japan

**\*25P-089**     **DNA Nanostructure-based Chromatin-inspired Heterogeneous Fluid Gel Structures**

[Hong Xuan Chai](#)<sup>1</sup>, Masahiro Takinoue<sup>1,2</sup>

<sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, Japan, <sup>2</sup>School of Computing, Tokyo Institute of Technology, Japan

### Nucleic acid: Others

**\*25P-090**     **Mechanical diversity and folding intermediates of parallel-stranded G-quadruplexes with a bulge**

[Yashuo Zhang](#), Huijuan You

School of Pharmacy, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

**\*25P-091**     **Force propagation in dense DNA solution**

[Miku Nakao](#)<sup>1</sup>, Saki Matsuyama<sup>1</sup>, Akinori Miyamoto<sup>2</sup>, Yoshihiro Murayama<sup>1,2</sup>

<sup>1</sup>Department of Biomedical Engineering, Tokyo University of Agriculture and Technology, <sup>2</sup>Department of Applied Physics, Tokyo University of Agriculture and Technology

### Chromatin & Chromosomes

**\*25P-092**     **Molecular motor in a box: a model for chromatin remodelers**

[Sophie Klempahn](#)<sup>1</sup>, Helmut Schiessel<sup>1,2</sup>

<sup>1</sup>Cluster of Excellence Physics of Life, TUD Dresden University of Technology, 01307 Dresden, Germany, <sup>2</sup>Institut für Theoretische Physik, TUD Dresden University of Technology, 01069 Dresden, Germany

**\*25P-093**     **Coarse-grained Simulations for Unidirectional Translocation of Bacterial SMC Complex via DNA-segment Capture**

[Masataka Yamauchi](#), Giovanni B. Brandani, Tsuyoshi Terakawa, Shoji Takada

Dept. of Biophysics, Grad. of Sci., Kyoto Univ

# Poster Sessions

---

---

**25P-095**      **Theory of viscoelasticity of chromatin and its surrounding environment**

Soya Shinkai, Shuichi Onami

RIKEN Center for Biosystems Dynamics Research

## Water & Hydration & Electrolyte

**\*25P-096**      **Effect of osmolytes on the activity of  $\alpha$ -amylase**

Sachika Furukawa, Mafumi Hishida

Department of Chemistry, Faculty of Science, Tokyo University of Science, Tokyo, Japan

**25P-097**      **Investigations of hydration structures and dynamics around proteins and peptides with MD simulations**

Takuya Takahashi<sup>2</sup>, Ryutaro Inou<sup>1</sup>, Yui Nakamura<sup>1</sup>, Simon Hikiri<sup>2</sup>

<sup>1</sup>Graduate School of Life Sciences, Ritsumeikan University, Kusatsu, Japan, <sup>2</sup>College of Life Sciences, Ritsumeikan University, Kusatsu, Japan

## Molecular genetics & Gene expression

**\*25P-098**      **Effects of transcription termination elements on in vitro genome transcription**

Keisuke Saito, Yukino Matsui, Nobuhide Doi, Kei Fujiwara

Dept. of Biosci. and Info., Keio University

## Morphogenesis and Development

**\*25P-099**      **Three-dimensional Mechanical Cooperativity Optimises Epithelial Wound Healing**

Shu En Lim, Rob Tetley, Yanlan Mao

University College London

**Tuesday, June 25****Muscle**

- \*25P-100** **Myosin and tropomyosin-troponin complementarily regulate thermal activation of striated muscles**  
Shuya Ishii<sup>1,2</sup>, Kotaro Oyama<sup>1,2</sup>, Fuyu Kobirumaki-Shimozawa<sup>2</sup>, Tomohiro Nakanishi<sup>2,3</sup>, Naoya Nakahara<sup>4</sup>, Madoka Suzuki<sup>5</sup>, Shin'ichi Ishiwata<sup>6</sup>, Norio Fukuda<sup>2</sup>  
<sup>1</sup>QST, Gunma, Japan, <sup>2</sup>Dept Cell Physiol, Sch Med, Jikei Univ, Tokyo, Japan, <sup>3</sup>Dept Anesthesiology, Sch Med, Jikei Univ, Tokyo, Japan, <sup>4</sup>Dept Mol Physiol, Sch Med, Jikei Univ, Tokyo, Japan, <sup>5</sup>IPR, Osaka Univ, Osaka, Japan, <sup>6</sup>Fac Sci Engrn, Waseda Univ, Tokyo, Japan
- 25P-101** **Observation of power stroke coordination in DNA Origami based artificial myosin filaments**  
Hiroki Fukunaga<sup>1</sup>, Takumi Washio<sup>2,3</sup>, Keisuke Fujita<sup>4</sup>, Masashi Ohmachi<sup>4</sup>, Hiroaki Takagi<sup>5</sup>, Keigo Ikezaki<sup>6</sup>, Toshio Yanagida<sup>7</sup>, Mitsuhiro Iwaki<sup>1,8</sup>  
<sup>1</sup>Adv ICT Res Inst, NICT, <sup>2</sup>UT-Heart Inc, <sup>3</sup>GSFS, The University of Tokyo, <sup>4</sup>BDR, Riken, <sup>5</sup>Dept. Phys., Nara Medical University, <sup>6</sup>Grad. Sch. Sci., The University of Tokyo, <sup>7</sup>IST, Osaka University, <sup>8</sup>IFReC, Osaka University

**Molecular motor**

- \*25P-102** **Spontaneous  $\gamma$  subunit rotation upon conformational changes of the  $\alpha$ ,  $\beta$  subunits in F1-ATPase**  
Masahiro Motohashi<sup>1,2</sup>, Mao Oide<sup>2,5</sup>, Chigusa Kobayashi<sup>3</sup>, Jaewoon Jung<sup>2,3</sup>, Eiro Muneyuki<sup>1</sup>, Yuji Sugita<sup>2,3,4</sup>  
<sup>1</sup>Fac. Sci. Engineering, Chuo Univ., <sup>2</sup>RIKEN CPR, <sup>3</sup>RIKEN R-CCS, <sup>4</sup>RIKEN BDR, <sup>5</sup>PRESTO, JST
- \*25P-103** **Characterization of the motility of tetrahymena kinesin 9A and 9B**  
Hiroto Ishii, Masahiko Yamagishi, Junichiro Yajima  
 Graduate School of Arts and Science, The University of Tokyo, Tokyo, Japan
- \*25P-104** **Modeling the motion of heterodimeric kinesins reveals head-head coordination in a KIF1A dimer**  
Tomoki Kita, Kazuo Sasaki, Shinsuke Niwa  
 Tohoku University

# Poster Sessions

---

---

- \*25P-105**     **Structural analysis of ATP synthases embedded in a lipid bilayer under proton motive force by cryoEM**  
Atsuki Nakano<sup>1</sup>, Jun-ichi Kishikawa<sup>2</sup>, Kaoru Mitsuoka<sup>3</sup>, Ken Yokoyama<sup>1</sup>  
<sup>1</sup>Fac. of Life Sci., Kyoto Sangyo Univ, <sup>2</sup>Applied Biology, Kyoto Institute of Technology, <sup>3</sup>Research Center for Ultra-High Voltage Electron Microscopy, Osaka University
- 25P-106**     **Application of information theory to understand cooperative force generation between skeletal myosin molecules**  
Motoshi Kaya, Arun Kasimchetty, Hideo Higuchi  
Department of Physics, University of Tokyo
- 25P-107**     **Extreme-Value Analysis of Intracellular Cargo Transport by Motor Proteins**  
Takuma Naoi<sup>1</sup>, Yuki Kagawa<sup>1</sup>, Kimiko Nagino<sup>1</sup>, Shinsuke Niwa<sup>2</sup>,  
Kumiko Hayashi<sup>1,3</sup>  
<sup>1</sup>Department of Applied Physics, Graduate School of Engineering, Tohoku University, <sup>2</sup>Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, <sup>3</sup>Institute for Solid State Physics, The University of Tokyo
- 25P-108**     **Comparative analysis of cilia force production in effective and recovery strokes of isolated *Volvox carteri* cells**  
Ryuta Yamaguchi, Katsuya Shimabukuro  
National Institute of Technology, Ube College
- 25P-109**     **Cryo-EM structure of mammalian V-ATPase.**  
Yui Nishida<sup>1</sup>, Atsuko Nakanishi<sup>2</sup>, Atsuki Nakano<sup>1</sup>, Fuka Ueda<sup>1</sup>,  
Kaoru Mitsuoka<sup>2</sup>, Ken Yokoyama<sup>1</sup>  
<sup>1</sup>Kyoto Sangyo Univ, Kyoto, Japan, <sup>2</sup>Research Center for UHVEM, Osaka, Japan

## Single Molecule Biophysics

- \*25P-110**     **Regulation of anticalin-CTLA4 binding mechano-stability by altering protein pulling geometry**  
Yang Sun<sup>1,2</sup>  
<sup>1</sup>Department of Chemistry, University of Basel, <sup>2</sup>Department of Biosystems Science and Engineering, ETH Zurich

**Tuesday, June 25**

- \*25P-111**     **Versatile peptide probes for labeling cell-surface GPCR**  
Toshiki Yoda<sup>1</sup>, Yasushi Sako<sup>2</sup>, Asuka Inoue<sup>1</sup>, Masataka Yanagawa<sup>1</sup>  
<sup>1</sup>Molecular and Cellular Biochemistry, Graduate School of Pharmaceutical Sciences, Tohoku University, Miyagi, Japan, <sup>2</sup>Cellular Informatics Laboratory, RIKEN Cluster for Pioneering Research, Saitama, Japan
- \*25P-112**     **The role of von Willebrand factor-like Domains in Mucin Adhesion**  
Rebecca Schlatterer<sup>1</sup>, Oliver Lieleg<sup>2</sup>, Bizan N. Balzer<sup>1,3</sup>  
<sup>1</sup>Institute of Physical Chemistry, University of Freiburg, Freiburg, Germany, <sup>2</sup>TUM School of Engineering and Design, Department for Materials Engineering and Center for Protein Assemblies (CPA) & Munich Institute of Biomedical Engineering (MIBE), TU München, Garching, Germany, <sup>3</sup>Cluster of Excellence livMatS @ FIT – Freiburg Center for Interactive Materials and Bioinspired Technologies and Freiburg Materials Research Center (FMF), University of Freiburg, Freiburg, Germany
- \*25P-113**     **Self-fueled Peptide Assembly Investigated via AFM-based Imaging**  
Christiane Wenzel<sup>1,2</sup>, Mahesh Pol<sup>1</sup>, Kun Dai<sup>1</sup>, Charalampos Pappas<sup>1</sup>, Bizan N. Balzer<sup>1,2,3</sup>, Thorsten Hugel<sup>1,2</sup>  
<sup>1</sup>Cluster of Excellence livMatS @ FIT – Freiburg Center for Interactive Materials and Bioinspired Technologies, University of Freiburg, Georges-Köhler-Allee 105, D-79110 Freiburg, Germany, <sup>2</sup>Institute of Physical Chemistry, University of Freiburg, Albertstraße 21, D-79104 Freiburg, Germany, <sup>3</sup>Freiburg Materials Research Center (FMF), University of Freiburg, Stefan-Meier-Straße 21, D-79104 Freiburg, Germany
- \*25P-114**     **Force-Dependent Structural Changes of Filamin C Rod Domains Regulated by Filamin C Dimer**  
Yunxin Deng<sup>1</sup>, Jie Yan<sup>1,2</sup>  
<sup>1</sup>Mechanobiology Institute, National University of Singapore, Singapore 117411, <sup>2</sup>Department of Physics, National University of Singapore, Singapore 117542
- 25P-115**     **State-of-the-art high-speed atomic force microscopy for filming faster biomolecular dynamics**  
Shingo Fukuda<sup>1</sup>, Akihiro Otomo<sup>2,3</sup>, Ryota Iino<sup>2,3</sup>, Toshio Ando<sup>1</sup>  
<sup>1</sup>WPI NanoLSI, Kanazawa Univ., <sup>2</sup>Institute for Molecular Science, NINS, <sup>3</sup>SOKENDAI
- 25P-116**     **In-cell single-molecule FRET measurement of cytosolic RAF proteins**  
Kenji Okamoto, Yasushi Sako  
RIKEN CPR

# Poster Sessions

---

---

**\*25P-117**     **Extent of stochasticity in folding dynamics determines the force-tolerance and longevity of mechanosensing proteins**

Pritam Saha, Vishavdeep Vashisht, Ojas Singh, Gaurav Kumar Bhati, Surbhi Garg, Dr. Sabyasachi Rakshit

Department of chemical sciences, Indian Institute of Science Education and research Mohali, India

## Cell biology: Adhesion

**25P-118**     **A Novel Semi-Automatic Software Tool for Focal Adhesion Analysis**

Joanna Hajduk<sup>1,2</sup>, Patrycja Twardawa<sup>1,2</sup>, Zenon Rajfur<sup>2,3</sup>

<sup>1</sup>Doctoral School of Exact and Natural Sciences, Jagiellonian University, Łojasiewicza 11, 30-348 Cracow, Poland, <sup>2</sup>Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University, Łojasiewicza 11, 30-348 Cracow, Poland, <sup>3</sup>Jagiellonian Center of Biomedical Imaging, Jagiellonian University, 30-348 Cracow, Poland

## Cell biology: Motility

**\*25P-119**     **Effect of Substrate Elasticity on Adhesion and Motility of Cancer Cells**

Shotaro Yamamoto<sup>1</sup>, Tomoko Oyama<sup>2</sup>, Kotaro Oyama<sup>2</sup>, Mitsumasa Taguchi<sup>2</sup>, Hiromi Miyoshi<sup>1</sup>

<sup>1</sup>Tokyo Metropolitan University, <sup>2</sup>National Institutes for Quantum Science and Technology

**\*25P-120**     **Decoding Antidote Access: Binding/Unbinding Pathways toward Organophosphate-Inhibited HuAChE**

Kowit Hengphasatporn<sup>1</sup>, Nalinee Kongkaew<sup>2</sup>, Thanyada Rungrotmongkol<sup>2,3</sup>, Yasuteru Shigeta<sup>1</sup>, Ryuhei Harada<sup>1</sup>

<sup>1</sup>Center for Computational Sciences, University of Tsukuba, Tsukuba, Ibaraki, Japan, <sup>2</sup>Program in Bioinformatics and Computational Biology, Graduate School, Chulalongkorn University, Bangkok, Thailand., <sup>3</sup>Center of Excellence in Structural and Computational Biology, Department of Biochemistry, Faculty of Science, Chulalongkorn University, Bangkok, Thailand.

**\*25P-121**      **$\beta$ -arrestin acts as an inhibitor of trimeric G protein signaling in eukaryotic chemotaxis**

Masaki Muromoto<sup>1</sup>, Satomi Matsuoka<sup>1,2,3</sup>, Masahiro Ueda<sup>1,2,3</sup>

<sup>1</sup>Graduate School of Frontier Biosciences, Osaka University, <sup>2</sup>Graduate School of Science, Osaka University, <sup>3</sup>Center for Biosystems Dynamics Research, RIKEN

- \*25P-122**      **Conversion from Linear Contraction to Rotation of Stress Fibers in Migrating Keratocytes**  
Chika Okimura<sup>1</sup>, Shu Akiyama<sup>1</sup>, Yukinori Nishigami<sup>2,3</sup>, Tatsunari Sakurai<sup>4</sup>, Yoshiaki Iwadate<sup>1</sup>  
<sup>1</sup>Department of Biology, Yamaguchi University, <sup>2</sup>Research Institute for Electronic Science, Hokkaido University, <sup>3</sup>Graduate School of Life Science, Hokkaido University, <sup>4</sup>Department of Mathematical Engineering, Musashino University
- \*25P-123**      **Rebirth of Fish Epidermal Keratocyte Sheets**  
Norihiko Nishimura, Chika Okimura, Yoshiaki Iwadate  
Department of Biology, Yamaguchi University
- \*25P-124**      **Integration between Epidermal Keratocyte Sheets Accompanied by Rapid Disassembly of Actomyosin Cables**  
Kazuma Shimizu, Chika Okimura, Yoshiaki Iwadate  
Department of Biology, Yamaguchi University
- \*25P-125**      **Side-by-side interaction of adjacent cells dominates the collaborative dynamics and ordering of collective cells**  
Mitsuru Sentoku<sup>1</sup>, Miki Takei<sup>1</sup>, Masaharu Endo<sup>1</sup>, Kenji Yasuda<sup>1,2</sup>  
<sup>1</sup>Department of Pure and Applied Physics, Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan, <sup>2</sup>Department of Physics, School of Advanced Science and Engineering, Waseda University, Tokyo, Japan
- \*25P-126**      **Mimicking dynamics of human gastrulation: microprint culture of two types of cells derived from human iPS cells**  
Ryo Kojima<sup>1</sup>, Hazuki Tuboi<sup>1</sup>, Miyu Mori<sup>1</sup>, Chihiro Takeuchi<sup>1</sup>, Kiyoshi Ohnuma<sup>1,2</sup>  
<sup>1</sup>Department of Bioengineering, Nagaoka University of Technology, <sup>2</sup>Department of Science of Technology Innovation, Nagaoka University of Technology
- 25P-127**      **Structural and Functional Insights into *Drosophila melanogaster* Sperm Flagella: A Focus on Axonemal Architecture and Beating Patterns**  
Sho Tamai<sup>1</sup>, Kosei Sato<sup>2</sup>, Kazuhiro Oiwa<sup>1,2</sup>  
<sup>1</sup>Graduate School of Science, University of Hyogo, <sup>2</sup>National Institute of Information and Communications Technology

## Poster Sessions

---

**25P-128**      **Structural Changes of Beating Comb Plates of Ctenophores during Effective and Recovery Strokes as Probed by Time-resolved X-ray Diffraction Recording**

Hiroyuki Iwamoto<sup>1</sup>, Mio Kosaka<sup>2</sup>, Ryo Yokoya<sup>2</sup>, Kei Jokura<sup>2</sup>, Kazuhiro Oiwa<sup>3</sup>, Kazuo Inaba<sup>2</sup>

<sup>1</sup>Spring-8 • JASRI, Hyogo, Japan, <sup>2</sup>Univ. Tsukuba, Shimoda Marine Research Ctr., Shizuoka, Japan, <sup>3</sup>NICT • Bio-ICT, Hyogo, Japan

**25P-129**      **Identifying direct and indirect interactions among collectively moving individuals using pairwise information flow metric**

M. Mohiuddin<sup>1,2</sup>, Sulimon Sattari<sup>4</sup>, Uday S. Basak<sup>3</sup>, Tamiki Komatsuzaki<sup>1,4,5,6</sup>

<sup>1</sup>Graduate School of Chemical Sciences and Engineering, Hokkaido University, Japan, <sup>2</sup>Comilla University, Cumilla-3506, Bangladesh, <sup>3</sup>Pabna University of Science and Technology, Pabna 6600, Bangladesh, <sup>4</sup>Research Center of Mathematics for Social Creativity, Research Institute for Electronic Science, Hokkaido University, Japan, <sup>5</sup>Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University, Japan, <sup>6</sup>The Institute of Scientific and Industrial Research, Osaka University, Japan

**25P-130**      **Structural and functional analyses of the C-terminal cytoplasmic domain of a flagellar export gate protein, FlhB**

Miki Kinoshita<sup>1,2</sup>, Tomoko Miyata<sup>1,2</sup>, Keiichi Namba<sup>1,2</sup>, Tohru Minamino<sup>1</sup>

<sup>1</sup>Graduate School of Frontier Biosciences, Osaka University, Suita, Osaka, Japan, <sup>2</sup>JEOL YOKOGUSHI Research Alliance Laboratories, Osaka University, Suita, Osaka, Japan

### Cell biology: Cytoskeleton & Membrane skeleton

**\*25P-131**      **Crosstalk of two bacterial actins composed of the force generation unit of Spiroplasma swimming**

Daichi Takahashi<sup>1,2</sup>, Makoto Miyata<sup>2,3</sup>, Ikuko Fujiwara<sup>4</sup>

<sup>1</sup>Research Institute for Interdisciplinary Science, Okayama University, Japan, <sup>2</sup>Graduate School of Science, Osaka Metropolitan University, Japan, <sup>3</sup>The OMU Advanced Research Institute for Natural Science and Technology, Osaka Metropolitan University, Japan, <sup>4</sup>Department of Materials Sciences and Bioengineering, Nagaoka University of Technology, Japan

**\*25P-132**      **Microtubule Fatigue Under Repetitive Mechanical Stress**

Syeda Rubaiya Nasrin<sup>1</sup>, Akira Kakugo<sup>1</sup>, Neda M. Bassir Kazeruni<sup>2</sup>, Masatoshi Ichikawa<sup>1</sup>

<sup>1</sup>Kyoto University, <sup>2</sup>Columbia University



**Tuesday, June 25**

- 25P-133** **Dominant negative mutations in  $\gamma$ -tubulin cause partial loss of protofilaments in centriole triplet microtubules**  
Yuki Nakazawa<sup>1,2</sup>, Mao Horii<sup>3</sup>, Akira Noga<sup>1,3,4</sup>, Ken-ichi Wakabayashi<sup>4,5</sup>, Masafumi Hirono<sup>1</sup>  
<sup>1</sup>Dep. Frontier Biosci., Hosei Univ., Tokyo, Japan, <sup>2</sup>STG, OIST, Okinawa, Japan, <sup>3</sup>Dep. BioSci., Grad. Sch. Sci., Univ. Tokyo, Tokyo, Japan, <sup>4</sup>Inst. Innov. Res., Tokyo Inst. Tech., Tokyo, Japan, <sup>5</sup>Fac. Life Sci., Kyoto Sangyo Univ., Kyoto, Japan
- 25P-134** **Actin fluctuations regulate cofilin binding**  
 Akihiro Narita  
 Nagoya Univ.
- 25P-135** **Signaling Mechanisms to Regulate Activation of Actin Depolymerization Factor Cofilin in Mast Cells**  
Ruriko Suzuki<sup>1</sup>, Satoru Yokawa<sup>2</sup>, Tadahide Furuno<sup>2</sup>, Naohide Hirashima<sup>1</sup>  
<sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan, <sup>2</sup>Sch. Pharm., Aichi Gakuin Univ., Nagoya, Japan

**Cell biology: Signal transduction & Cell membrane**

- \*25P-136** **The maximum phagocytic limit of macrophages is determined by the maximum expansion ability of the local cell membrane surrounding antigens.**  
Dan Horonushi<sup>1</sup>, Sota Suzuki<sup>1</sup>, Maiha Ando<sup>1</sup>, Haruka Yuki<sup>2</sup>, Kenji Yasuda<sup>1,2</sup>  
<sup>1</sup>Department of Pure and Applied Physics, Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan., <sup>2</sup>Department of Physics, School of Advanced Science and Engineering, Waseda University, Tokyo, Japan.
- \*25P-137** **Lipid domains in the inner leaflet of cell plasma membranes serve as a signaling platform for K-Ras**  
Toshiki Mori<sup>1</sup>, Koichiro M. Hirose<sup>2</sup>, Rinshi S. Kasai<sup>3</sup>, Tomohiko Taguchi<sup>4</sup>, Yasunari Yokota<sup>5</sup>, Kenichi G.N. Suzuki<sup>1,2,3</sup>  
<sup>1</sup>UGSAS, Gifu Univ., Japan, <sup>2</sup>iGCORE, Gifu Univ., Japan, <sup>3</sup>Natl. Cancer Ctr. Res. Inst., Japan, <sup>4</sup>Grad. Sch. Life Sci., Tohoku Univ., Japan, <sup>5</sup>Dept. Eng., Gifu Univ., Japan

# Poster Sessions

---

---

**25P-138**      **ERK-mediated STAT3 inhibition causes dynamic heterogeneity in IL-6 signaling**

Keisuke Fujita<sup>1</sup>, Masahiro Ueda<sup>1,2</sup>

<sup>1</sup>Laboratory for Cell Signaling Dynamics, RIKEN BDR, Osaka, Japan, <sup>2</sup>Laboratory of Single Molecule Biology, Graduate School of Frontier Biosciences, Osaka University, Osaka, Japan

**25P-139**      **Intracellular information flow in RAS-MAPK signaling**

Nobuhisa Umeki<sup>1</sup>, Yoshiyuki Kabashima<sup>2,3</sup>, Yasushi Sako<sup>1</sup>

<sup>1</sup>Cellular Informatics Laboratory, RIKEN, CPR, Wako, Japan, <sup>2</sup>Institute for Physics of Intelligence, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Trans-Scale Quantum Science Institute, The University of Tokyo, Tokyo, Japan

## Biological & Artificial membrane: Structure & Property

**\*25P-140**      **Protein accumulation on amphiphilic protein-phospholipid hybrid leaflet**

Masato Suzuki, Koki Kamiya

Graduate School of Science and Technology, Gunma University

**\*25P-141**      **Creation of Asymmetric Membrane Vesicles with a Protein Inner Membrane Mixed with Phospholipids**

Yuki Nagai, Koki Kamiya

Graduate School of Science and Technology, Gunma Univ., Gunma, Japan

**\*25P-142**      **Triglyceride-Tethered Membrane Lipase Sensor**

Samara Elizabeth Bridge<sup>1</sup>, Upeksha Mirissa Lankage<sup>1</sup>, Bruce Cornell<sup>1,3</sup>, Stephen Holt<sup>1,2</sup>, Matt Padula<sup>1</sup>, Charles Cranfield<sup>1</sup>

<sup>1</sup>School of Life Sciences, University of Technology Sydney, Ultimo, NSW 2007, Australia, <sup>2</sup>Australian Nuclear Science and Technology Organisation, Lucas Heights, NSW 2234, Australia, <sup>3</sup>SDX, Surgical Diagnostics Pty Ltd., Roseville, NSW 2069, Australia

**25P-143**      **Characterization of Lipid Vesicles Adsorbed on Bovine Serum Albumin: Adhesion and Large Nano-indentation**

Eman Ramadan Sarsour<sup>1</sup>, Tomohiro Hayashi<sup>2</sup>

<sup>1</sup>Department of Physics, Faculty of Science, Helwan University, Cairo, Egypt, <sup>2</sup>Department of Materials Science and Engineering, Tokyo Institute of Technology, JAPAN

**Tuesday, June 25****25P-144 Decoding functional oligomeric states of membrane-associated protein oligomers forming membrane pores**

Radek Šachl<sup>1</sup>, Vandana Singh<sup>1</sup>, Sabína Čujová<sup>1</sup>, Petra Riegerová<sup>1</sup>, Martin Hof<sup>1</sup>, Julia P. Steringer<sup>2</sup>, Walter Nickel<sup>2</sup>

<sup>1</sup>Department of Biophysical Chemistry, J. Heyrovský Institute of Physical Chemistry of the Academy of Sciences of the Czech Republic, Prague, 182 23, Czech Republic,

<sup>2</sup>Heidelberg University Biochemistry Center, Heidelberg, Germany

**25P-145 Solid-Supported-Membrane-Based Electrophysiology: Application to the Analysis of Membrane Binding**

Ronald J Clarke<sup>1</sup>, Francesco Tadini-Buoninsegni<sup>2</sup>

<sup>1</sup>School of Chemistry, University of Sydney, Sydney NSW, Australia, <sup>2</sup>Department of Chemistry "Ugo Schiff", University of Florence, Sesto Fiorentino, Florence, Italy

**Biological & Artificial membrane: Dynamics****\*25P-146 Unraveling of the mechanisms of hierarchical mesoscale domain organization in cell plasma membranes by super-resolution microscopy and single-molecule tracking.**

Touki Kawai<sup>1</sup>, Rinshi S. Kasai<sup>2</sup>, Koichiro M. Hirose<sup>3</sup>, Yasunari Yokota<sup>4</sup>, Takahiro K. Fujiwara<sup>5</sup>, Akihiro Kusumi<sup>6</sup>, Kenichi G. N. Suzuki<sup>2,3</sup>

<sup>1</sup>United Grad. Sch, Agri, Sci, Gifu Univ., Gifu, Japan, <sup>2</sup>Natl. Cancer. Ctr. Res. Inst. Tokyo, Japan, <sup>3</sup>iGCORE, Gifu Univ., Gifu, Japan, <sup>4</sup>Dept. Eng., Gifu Univ., Gifu, Japan, <sup>5</sup>iCeMS, Kyoto Univ., Kyoto, Japan, <sup>6</sup>OIST, Okinawa, Japan

**\*25P-147 Impact of peptides on the solubility of Amphotericin B and its sterol-specific membrane activity**

Lissy M. Hartmann<sup>1</sup>, Stephen A. Holt<sup>2</sup>, Robert A. Russell<sup>2</sup>, Anton P. Le Brun<sup>2</sup>, Anneka C. Pereira Schmidt<sup>3</sup>, Chandra H. Chavali<sup>3</sup>, Evelyne Deplazes<sup>1,3</sup>, Charles G. Cranfield<sup>1</sup>

<sup>1</sup>School of Life Sciences, University of Technology Sydney, 15 Broadway, Ultimo, NSW 2007, Australia, <sup>2</sup>ANSTO, New Illawarra Road, Lucas Heights, NSW 2234, Australia, <sup>3</sup>School of Chemistry and Molecular Biosciences, University of Queensland, 68 Cooper Rd, Brisbane City, QLD 4072, Australia

**\*25P-148 Acceleration of lipid exchange reaction between human cells and supported lipid bilayers**

Asahi Gono, Takashi Okuno

Faculty of Science, Yamagata Univ.

# Poster Sessions

---

---

**25P-149**     **Antibacterial activity of C-terminal fragments of NEMURI**

Moynul Hasan

Institute for Genetic Medicine, Hokkaido University, Japan.

## Biological & Artificial membrane: Excitation & Channels

**\*25P-150**     **Photocaged amino acid method elucidates the potency of individual positively-charged residues in PIP2-dependency of the Kir2.1 inwardly rectifying potassium channel**

Junxian Zhou, Natsuki Mizutani, Kohei Yamamoto, Yoshifumi Okochi, Yasushi Okamura

Graduate School of Medicine, Osaka University

**25P-151**     **ATP directly regulates the voltage-gated proton channel**

Akira Kawanabe<sup>1</sup>, Kohei Takeshita<sup>2</sup>, Maki Takata<sup>1</sup>, Yuichiro Fujiwara<sup>1,3</sup>

<sup>1</sup>Faculty of Medicine, Kagawa University, <sup>2</sup>Riken Spring-8 center, <sup>3</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University

## Membraneless Organelle, autophagy, Liquid-liquid phase separation

**\*25P-153**     **Coalescence of liquid or gel-like DNA-encapsulating micro-droplets**

Takashi Nishio<sup>1,2</sup>, Helmut Schiessel<sup>1,3</sup>

<sup>1</sup>Cluster of Excellence Physics of Life, TUD Dresden University of Technology,

<sup>2</sup>Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), <sup>3</sup>Institut für Theoretische Physik, TUD Dresden University of Technology

**\*25P-154**     **Aberrant phase transition of stress granules in living cells observed by Raman/Brillouin microscopy and machine learning**

Ren Shibuya<sup>1</sup>, Shinji Kajimoto<sup>1,2</sup>, Hideyuki Yaginuma<sup>3,4</sup>, Tetsuro Ariyoshi<sup>3,4</sup>, Yasushi Okada<sup>3,4</sup>, Takakazu Nakabayashi<sup>1</sup>

<sup>1</sup>Graduate School of Pharmaceutical Sciences, Tohoku University, Japan, <sup>2</sup>JST PRESTO, Japan, <sup>3</sup>WPI-IRCIN, The University of Tokyo, Japan, <sup>4</sup>RIKEN BDR, Japan

**\*25P-155**     **Molecular weight polydispersity initiates nucleation of polymer blends around the phase separation boundary**

Akari Kamo<sup>1</sup>, Arash Nikoubashman<sup>2</sup>, Miho Yanagisawa<sup>1,3</sup>

<sup>1</sup>Department of Physics, Graduate School of Science, The University of Tokyo, Japan,

<sup>2</sup>Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany, <sup>3</sup>Komaba Institute of Science, Graduate School of Arts and Sciences, The University of Tokyo, Japan

- \*25P-156** **Hyperphosphorylation of nucleolar protein Nopp140 drives mitotic nucleolar disassembly.**  
Hisashi Shimamura<sup>1</sup>, Yuki Norizoe<sup>2</sup>, Takahiro Sakaue<sup>2</sup>, Shige H. Yoshimura<sup>3</sup>  
<sup>1</sup>Faculty of Integrated Human Studies, Kyoto University, <sup>2</sup>College of Science and Engineering, Aoyama Gakuin University, <sup>3</sup>Graduate School of Biostudies, Kyoto University
- 25P-157** **Molecular dynamics of autophagosomal lipid transfer**  
Yuji Sakai<sup>1,2,3</sup>, Kazuaki Matoba<sup>4</sup>, Nobuo Noda<sup>5</sup>, Yuji Sugita<sup>6</sup>  
<sup>1</sup>Institute for Life and Medical Sciences, Kyoto University, <sup>2</sup>Graduate School of Medicine, The University of Tokyo, <sup>3</sup>RIKEN iTHEMS, <sup>4</sup>Institute of Microbial Chemistry, <sup>5</sup>Institute for Genetic Medicine, Hokkaido University, <sup>6</sup>RIKEN Cluster for Pioneering Research
- 25P-158** **Designer coacervates for protein sequestration**  
Akihiro Kishimura<sup>1,2,3,4</sup>, Biplab K C<sup>1,2</sup>, Ryoma Omae<sup>1,2</sup>, Hiroshi Kamizawa<sup>2</sup>, Gakuto Takeda<sup>1,2</sup>, Takumi Yamada<sup>2</sup>, Hinano Nakamoto<sup>2</sup>, Teruki Nii<sup>1</sup>, Takeshi Mori<sup>1,4</sup>, Yoshiki Katayama<sup>1,3,4,5</sup>  
<sup>1</sup>Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, Japan, <sup>2</sup>Graduate School of System Life Sciences, Kyushu University, Fukuoka, Japan, <sup>3</sup>Center for Molecular Systems (CMS), Kyushu University, Fukuoka, Japan, <sup>4</sup>Center for Future Chemistry, Kyushu University, Fukuoka, Japan, <sup>5</sup>Center for Advanced Medical Open Innovation, Kyushu University, Fukuoka, Japan
- 25P-159** **Highly Charged Proteins and Their Repulsive Interactions in Regulation of Biomolecular Condensation**  
Cheng Tan<sup>1</sup>, Jaewoon Jung<sup>1,2</sup>, Yuji Sugita<sup>1,2,3</sup>  
<sup>1</sup>RIKEN Center for Computational Science, <sup>2</sup>RIKEN Cluster for Pioneering Research, <sup>3</sup>RIKEN Center for Biosystems Dynamics Research
- 25P-160** **A Key Role of Less Bulky-Hydrophobic Amphipathic  $\alpha$ -helix in Autophagy**  
Taki Nishimura<sup>1,2,3</sup>, Gianmarco Lazzeri<sup>4,5</sup>, Noboru Mizushima<sup>2</sup>, Roberto Covino<sup>4,5</sup>, Sharon A Tooze<sup>3</sup>  
<sup>1</sup>PRESTO, Japan Science and Technology Agency, Tokyo, Japan, <sup>2</sup>Department of Biochemistry and Molecular Biology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Molecular Cell Biology of Autophagy Laboratory, The Francis Crick Institute, London, UK, <sup>4</sup>Frankfurt Institute for Advanced Studies, Frankfurt am Main, Germany, <sup>5</sup>Goethe University, Frankfurt am Main, Germany

# Poster Sessions

## Chemoreception

**\*25P-161** Ligand recognition of the *Vibrio cholerae* chemoreceptor for two distinct attractants, pyruvate and serine

Fuga Omori<sup>1</sup>, Hiroataka Tajima<sup>2,3</sup>, Ikuro Kawagishi<sup>1,2,3</sup>

<sup>1</sup>Grad. Sch. Sci. and Engin., Hosei Univ, <sup>2</sup>Fac. of Biosci. and Appl. Chem., Hosei Univ, <sup>3</sup>Res. Cent. for Micro-Nano Tech., Hosei Univ

## Neuroscience & Sensory systems

**\*25P-162** HS-AFM reveals the structural role of CaMKII in synaptic structural plasticity

Taisei Suzuki<sup>1</sup>, Takashi Sumikama<sup>2</sup>, Hideji Murakoshi<sup>3</sup>, Mikihiro Shibata<sup>2,4</sup>

<sup>1</sup>Grad. Sch. NanoLS., Kanazawa University, Ishikawa, Japan, <sup>2</sup>WPI-Nano Life Science Institute, Kanazawa University, Ishikawa, Japan, <sup>3</sup>Supportive Center for Brain Research, NIPS, Aichi, Japan, <sup>4</sup>Institute for Frontier Science Initiative, Kanazawa University, Ishikawa, Japan

**\*25P-163** Physics of transport through capillaries and the blood-brain barrier: comparative study of hydrogel phantom and living mouse models

Anastasia S Vanina<sup>1</sup>, Alexander Sychev<sup>1</sup>, Ivan Proskurkin<sup>2</sup>,  
Anastasia Lavrova<sup>2,3</sup>, Eugene Postnikov<sup>1,4</sup>

<sup>1</sup>Kursk State University, <sup>2</sup>Immanuel Kant Baltic Federal University, <sup>3</sup>Saint-Petersburg State Research Institute of Phthisiopulmonology, <sup>4</sup>Saratov State University

**25P-164** Spontaneous depolarization wave in the embryonic CNS: optical imaging with a voltage-sensitive dye

Yoko Momose-Sato<sup>1</sup>, Katsushige Sato<sup>2</sup>

<sup>1</sup>Kanto-Gakuin University, College of Nutrition, <sup>2</sup>Komazawa Women's University, Faculty of Human Health

**25P-165** Oscillations in the embryonic chick olfactory bulb: optical imaging with a voltage-sensitive dye

Katsushige Sato<sup>1</sup>, Yoko Momose-Sato<sup>2</sup>

<sup>1</sup>Komazawa Women's University, Faculty of Human Health, <sup>2</sup>Kanto-Gakuin University, College of Nutrition

**Tuesday, June 25****Neuronal circuit & Information processing****\*25P-166 Environmental oxygen information generates temperature response diversity in *C. elegans***

Misaki Okahata<sup>1,2</sup>, Taichiro Iki<sup>2</sup>, Sawako Yoshina<sup>3</sup>, Yohei Minakuchi<sup>4</sup>, Shohei Mitani<sup>3</sup>, Toshie Kai<sup>2</sup>, Toru Miura<sup>1</sup>, Atsushi Toyoda<sup>4</sup>, Akane Ohta<sup>1</sup>, Atsushi Kuhara<sup>1,5</sup>

<sup>1</sup>Inst. for Integrative Neurobio., Konan Univ, Japan, <sup>2</sup>Graduate School of Frontier Biosciences Osaka Univ., Japan, <sup>3</sup>Tokyo Women's Med. Univ., Japan, <sup>4</sup>National Inst. of Genetics, <sup>5</sup>PRIME, AMED

**25P-167 Construction of Single-Cell Level Linear Neural Network with Agarose Micro Fabrication Technology**

Shion Sakamoto<sup>1,2,3</sup>, Kentaro Kito<sup>1,2,3</sup>, Masahito Hayashi<sup>1,2,3</sup>, Tomoyuki Kaneko<sup>1,2,3</sup>

<sup>1</sup>Hosei university, <sup>2</sup>LaRC, <sup>3</sup>FB

**Behavior****25P-168 Anticipation Behavior of the Physarum Plasmodia to Periodic Light Stimulus**

Kazuki Moriguchi

Graduate School of Systems Information Science, Future University Hakodate, Hokkaido, Japan

**Photobiology: Vision & Photoreception****\*25P-169 The mechanism regulating the binding properties of retinal isomers in opsins**

Chihiro Fujiyabu, Takahiro Yamashita  
Kyoto University, Kyoto, Japan

**\*25P-170 Light-induced structural changes of a rhodopsin domain in a rhodopsin-bestrophin giant ion channel complex studied by time-resolved infrared spectroscopy**

Honda Nastuki<sup>1</sup>, Rei Yoshizumi<sup>1,2</sup>, Kandori Hideki<sup>1,2</sup>, Furutani Yuji<sup>1,2</sup>

<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology,

<sup>2</sup>Optobiotechnology Research Center, Nagoya Institute of Technology

# Poster Sessions

---

---

- \*25P-171**      **Exploration of the Diversity of Absorption Spectra in Vertebrate Retinal Photo-isomerase, RGR**  
Chunyangguang Li, Takashi Nagata, Naoya Morimoto, Keiichi Inoue  
The Institute for Solid State Physics, The University of Tokyo, Kashiwa, Japan
- \*25P-172**      **Exploring the spectral tuning mechanism of bestrhodopsin from *Phaeocystis antarctica***  
Yifan Liu<sup>1</sup>, Masae Konno<sup>1</sup>, Inoue Keiichi<sup>1</sup>, Ariel Chazan<sup>2</sup>,  
Andrey Rozenberg<sup>2</sup>, Oded Béjà<sup>2</sup>  
<sup>1</sup>The Institute for Solid State Physics, The University of Tokyo, Japan, <sup>2</sup>Faculty of Biology, Technion-Israel Institute of Technology, Israel
- 25P-173**      **In Vitro Analysis of the Effect of Narrowband and Broadband Light in Visible Range on Lens Epithelial Cell Migration**  
Hiromi Miyoshi<sup>1</sup>, Aki Nishida<sup>1</sup>, Masafumi Otomo<sup>1</sup>, Takuto Suzuki<sup>1</sup>, Yuki Tani<sup>2</sup>  
<sup>1</sup>Department of Mechanical Systems Engineering, Tokyo Metropolitan University,  
<sup>2</sup>HOYA CORPORATION, Vision Care Section
- 25P-174**      **Insights into light-driven chloride ion pump mechanism of NM-R3 and NpHR by molecular dynamics simulation**  
Masahiko Taguchi<sup>1,2</sup>, Akiya Moriuchi<sup>2</sup>, Hinano Ogawa<sup>2</sup>, Osamu Miyashita<sup>3</sup>,  
Eriko Nango<sup>1,2,4</sup>  
<sup>1</sup>IMRAM Tohoku Univ., <sup>2</sup>Grad. Sch. Sci. Tohoku Univ., <sup>3</sup>RIKEN R-CCS, <sup>4</sup>RIKEN SPring-8 Center

## Photobiology: Photosynthesis

- \*25P-175**      **Structure of S2 High-Spin State Manganese Cluster of Photosystem II by Multi-frequency Electron Paramagnetic Resonance (EPR) Spectroscopy**  
Kosaki Shinya<sup>1</sup>, Nakajima Yoshiki<sup>2</sup>, Shen Jian-Ren<sup>2</sup>, Mino Hiroyuki<sup>1</sup>  
<sup>1</sup>Grad. Sch. Sci., Nagoya Univ., Aichi, Japan, <sup>2</sup>Res. Inst. Interdiscip. Sci., Okayama Univ., Okayama, Japan
- \*25P-176**      **Oxygen-evolving photosystem II structures during S1–S2–S3 transitions**  
Hongjie Li, Yoshiki Nakajima, Michihiro Suga, Jian-Ren Shen  
Research Institute for Interdisciplinary Science and Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan



**Tuesday, June 25****25P-177 Theoretical analysis of the light-harvesting process in *C. thermophilum* type-I reaction center that binds three different species of chlorophyll molecules**Wataru Shimooka<sup>1</sup>, Hirotaka Kitoh-Nishioka<sup>2</sup>, Shigeru Itoh<sup>1</sup>, [Akihiro Kimura](#)<sup>1</sup><sup>1</sup>Department of Physics, Graduate School of Science, Nagoya University, <sup>2</sup>Faculty of Science and Engineering, Kindai University**25P-178 Electron Transfer Reactions in the Photosynthetic Reaction Center Complex lacking Iron-Sulfur Cluster Fx of Green Sulfur Bacterium *Chlorobaculum tepidum***Tomomi Inagaki<sup>1</sup>, Yukie Kojima<sup>2</sup>, Kazuki Terauchi<sup>1</sup>, Chihiro Azai<sup>2</sup><sup>1</sup>Graduate School of Life Sciences, Ritsumeikan University, Shiga, Japan, <sup>2</sup>Graduate School of Science and Engineering, Chuo University, Tokyo, Japan**Photobiology: Optogenetics & Optical control****\*25P-179 Antitumor effects of photo-induced cell death using an outward proton pump rhodopsin**[Shin Nakao](#)<sup>1</sup>, Keiichi Kojima<sup>1,2</sup>, Naoya Kenmotsu<sup>1</sup>, Yosuke Togashi<sup>1,2</sup>, Yuki Sudo<sup>1,2</sup><sup>1</sup>Grad. Sch., Med. Dent. and Pharm. Sci., Okayama Univ., Okayama, Japan., <sup>2</sup>Fac., Med. Dent. and Pharm. Sci., Okayama Univ., Okayama, Japan.**25P-180 Microbial Rhodopsin Engineering through Machine Learning and Automated Experiments**[Keiichi Inoue](#)<sup>1,2</sup>, Takashi Nagata<sup>1</sup>, Masae Konno<sup>1</sup>, Masayuki Karasuyama<sup>3</sup>, Yu Inatsu<sup>3</sup>, Kazuhito V. Tabata<sup>4</sup>, Ichiro Takeuchi<sup>2,5</sup><sup>1</sup>The Institute for Solid State Physics, The University of Tokyo, <sup>2</sup>RIKEN Center for Advanced Intelligence Project, <sup>3</sup>Graduate School of Engineering, Nagoya, Institute of Technology, <sup>4</sup>Graduate School of Engineering, The University of Tokyo, <sup>5</sup>Graduate School of Engineering, Nagoya University**Radiobiology & Active oxygen****25P-181 Analysis of Radiation-induced Stem Cell Competition and Bystander Response Using Titanium Characteristic X-ray Microbeam**[Masanori Tomita](#)<sup>1</sup>, Yuki Fujimichi<sup>1</sup>, Atsushi Ito<sup>2</sup><sup>1</sup>Sustainable Sys. Res. Lab., CRIEPI, Chiba, Japan, <sup>2</sup>Sch. Eng., Tokai Univ., Kanagawa, Japan

# Poster Sessions

## Origin of life & Evolution

**\*25P-182**    **The role of non-biological membraneless polyester microdroplets as protocells at the origins of life**

Tony Z Jia<sup>1,2</sup>, Kuhan Chandru<sup>3,4</sup>

<sup>1</sup>Earth-Life Science Institute, Tokyo Institute of Technology, 2-12-1-IE-1 Ookayama, Meguro-ku, Tokyo 152-8550, Japan, <sup>2</sup>Blue Marble Space Institute of Science, 600 1st Ave, Floor 1, Seattle, WA 98104, USA,, <sup>3</sup>Space Science Center (ANGKASA), Institute of Climate Change, National University of Malaysia, Selangor, 43650 Malaysia, <sup>4</sup>Polymer Research Center (PORCE), Faculty of Science and Technology, National University of Malaysia, Selangor, 43600 Malaysia

**\*25P-183**    **Creation of a Membraneless Protocell with Earth-abundant Transition Metal Catalysts**

Chen Chen<sup>1</sup>, Tony Z. Jia<sup>2,3</sup>, Ryuhei Nakamura<sup>1,2</sup>

<sup>1</sup>Biofunctional Catalyst Research Team, RIKEN Center for Sustainable Resource Science (CSRS), Wako, Japan, <sup>2</sup>Earth-Life Science Institute (ELSI), Tokyo Institute of Technology, Tokyo, Japan., <sup>3</sup>Blue Marble Space Institute of Science, Seattle, WA, 98104 USA

**\*25P-184**    **Primordial Evolution by Linking Sequence Information and Vesicle Reproduction**

Akiko Baba<sup>1</sup>, Keidai Sato<sup>1</sup>, Shuna Asanuma<sup>1</sup>, Ivo Henkys<sup>1</sup>,  
Tomoko Kawahata<sup>1</sup>, Ulf Olsson<sup>2</sup>, Anna Wang<sup>3</sup>, Masayuki Imai<sup>1</sup>

<sup>1</sup>Grad. Sch. Sci., Tohoku Univ., <sup>2</sup>Grad. Sch. Sci., Lund Univ., <sup>3</sup>Grad. Sch. Sci., New South Wales Univ.

**25P-185**    **Genetic properties influencing transcriptional variability**

Saburo Tsuru<sup>1</sup>, Chikara Furusawa<sup>1,2,3</sup>

<sup>1</sup>Universal Biology Institute, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Department of Physics, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Center for Biosystems Dynamics Research, RIKEN, Osaka, Japan

## Synthetic biology & Artificial cells

- \*25P-186** **Optimizing the in vitro expression profile of central dogma-related proteins**  
Chisato Nishizawa<sup>1</sup>, Shunsuke Aburaya<sup>2</sup>, Yuishin Kosaka<sup>1</sup>, Kenji Sugase<sup>1</sup>, Wataru Aoki<sup>3</sup>  
<sup>1</sup>Graduate School of Agriculture, Kyoto University, Kyoto, Japan, <sup>2</sup>Medical Institute of Bioregulation, Kyushu University, Fukuoka, Japan, <sup>3</sup>Graduate School of Engineering, Osaka University, Osaka, Japan
- \*25P-187** **Characterization of ribosome biogenesis in vitro**  
Yuishin Kosaka<sup>1</sup>, Yumi Miyawaki<sup>1</sup>, Megumi Mori<sup>1</sup>, Shunsuke Aburaya<sup>2</sup>, Chisato Nishizawa<sup>1</sup>, Takeshi Chujo<sup>3</sup>, Tatsuya Niwa<sup>4</sup>, Takumi Miyazaki<sup>1</sup>, Takashi Sugita<sup>5</sup>, Hideki Taguchi<sup>4</sup>, Kazuhito Tomizawa<sup>3</sup>, Kenji Sugase<sup>1</sup>, Mitsuyoshi Ueda<sup>1</sup>, Wataru Aoki<sup>6</sup>  
<sup>1</sup>Kyoto University, <sup>2</sup>Kyushu University, <sup>3</sup>Kumamoto University, <sup>4</sup>Tokyo Institute of Technology, <sup>5</sup>TechnoPro, Inc. TechnoPro R&D, Company, <sup>6</sup>Osaka University
- \*25P-188** **Light-Induced Control of Directional Movement in Chlamydomonas-Encapsulated Liposomes**  
Hiromasa Shiraiwa, Koichiro Akiyama, Shunsuke Shiomi, Masahito Hayashi, Tomoyuki Kaneko  
 LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ., Tokyo, Japan
- \*25P-189** **Construction of asymmetric lipid-protein membrane tension sensing system by using mechanosensitive channels**  
Kotaro Baba, Koki Kamiya  
 Graduate School of Science and Technology, Gunma University, Gunma, Japan
- 25P-190** **Designing a reproduction cycle of vesicles coupled with artificial metabolic pathways**  
Minoru Kurisu<sup>1</sup>, Peter Walde<sup>2</sup>, Masayuki Imai<sup>1</sup>  
<sup>1</sup>Department of Physics, Graduate School of Science, Tohoku University, Sendai, Japan, <sup>2</sup>Department of Materials Science, ETH Zürich, Zürich, Switzerland
- 25P-191** **Dynamic Instability of Totally-synthetic Supramolecular Dipeptide Fibers upon Hybridization of Surfactant Micelles**  
Ryou Kubota<sup>1</sup>, Shogo Torigoe<sup>1</sup>, Kazutoshi Nagao<sup>1</sup>, Yuya Hamanaka<sup>1</sup>, Itaru Hamachi<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Kyoto University, <sup>2</sup>JST ERATO

# Poster Sessions

## Genome biology

- \*25P-192** Heterogeneity of Genomic Sequence within Population in Single Plaque of Influenza Virus Revealed by Revio analysis  
Kenji Tamao<sup>1</sup>, Masayuki Su'etsugu<sup>2</sup>, Hiroyuki Noji<sup>1</sup>, Kazuhito Tabata<sup>1</sup>  
<sup>1</sup>Appl.Chem., Grad.Sch.Eng., Univ. Tokyo, <sup>2</sup>Dept.Life. Sci., Col.Sci., Univ.Rikkyo

## Computational biology: Bioinformatics

- \*25P-193** Improving Protein Complex Prediction through the Generation of Multiple Decoy Structures using Docking Software and Aggressive Refinement by AlphaFold2  
Seiya Tanaka<sup>1</sup>, Masaki Koyama<sup>1</sup>, Hiroki Onoda<sup>1,2</sup>, Leonard Chavas<sup>1,2</sup>, George Chikenji<sup>1</sup>  
<sup>1</sup>Nagoya University, <sup>2</sup>Synchrotron Radiation Research Center

## Computational biology: Molecular simulation

- \*25P-195** Elucidating the Binding Pathway of 'Abltide' to Abl Kinase through Enhanced 2D Replica Exchange Molecular Dynamics Simulations  
Yichao Wu  
Osaka University, WPI Premium Research Institute for Human Metaverse Medicine (WPI-PRIME)
- \*25P-196** Exploring Protein-Lipid Interactions in Membranes: A Coarse-Grained Perspective with Implicit Solvent Modeling  
Diego Ugarte<sup>1,3,4</sup>, Shoji Takada<sup>2</sup>, Yuji Sugita<sup>1,3,4</sup>  
<sup>1</sup>RIKEN R-CCS, Kobe, Japan, <sup>2</sup>Kyoto University, Kyoto, Japan, <sup>3</sup>RIKEN BDR, Kobe, Japan, <sup>4</sup>RIKEN CPR, Saitama, Japan
- \*25P-197** Investigating TDP43 Condensation and Contributions of Ions: A Multiscale Comparative Analysis of Coarse-Grained Models  
Yangyang Zhang<sup>1</sup>, Cheng Tan<sup>1</sup>, Yuji Sugita<sup>1,2,3</sup>  
<sup>1</sup>RIKEN Center for Computational Science, Kobe, Japan, <sup>2</sup>RIKEN Cluster for Pioneering Research, Wako, Japan, <sup>3</sup>RIKEN Center for Biosystem Dynamics Research, Kobe, Japan

- \*25P-198** **Virtual alanine scan for entire sequence of SARS-CoV-2 main protease complexed with ensitrelvir**  
Ayato Mizuno<sup>1</sup>, Tomoki Nakayoshi<sup>1,2</sup>, Koichi Kato<sup>1,3</sup>, Eiji Kurimoto<sup>1</sup>, Akifumi Oda<sup>1,4</sup>  
<sup>1</sup>Faculty of Pharmacy, Meijo University, Aichi, Japan, <sup>2</sup>Graduate School of Information Sciences, Hiroshima City University, Hiroshima, Japan, <sup>3</sup>Faculty of Pharmaceutical Sciences, Shonan University of Medical Sciences, Kanagawa, Japan, <sup>4</sup>Institute for Protein Research, Osaka University, Osaka, Japan
- \*25P-199** **Simulation of Lipid Membranes and Their Interaction with Polystyrene**  
Nora Kremer, Thorsten Koslowski  
University of Freiburg
- \*25P-200** **Enhancing protein conformation sampling with coevolution**  
Antoni Marciniak<sup>1,2</sup>, Darko Mitrovic<sup>1,2</sup>, Lucie Delemotte<sup>1,2</sup>  
<sup>1</sup>KTH Royal Institute of Technology, <sup>2</sup>SciLifeLab
- \*25P-201** **Charge–Charge Interactions in Molecular Dynamics Simulations of Glycans, Glycosaminoglycans, and Lipopolysaccharides**  
Denys Biriukov<sup>1,2,3</sup>, Miguel Riopedre-Fernández<sup>3</sup>, Hector Martinez-Seara<sup>3</sup>  
<sup>1</sup>National Centre for Biomolecular Research, Faculty of Science, Masaryk University, Brno, Czech Republic, <sup>2</sup>Central European Institute of Technology, Masaryk University, Brno, Czech Republic, <sup>3</sup>Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague, Czech Republic
- \*25P-202** **Quantifying chromosome structural dynamical pathways during cell fate decision making process**  
Xiakun Chu  
Advanced Materials Thrust, Function Hub, The Hong Kong University of Science and Technology (Guangzhou), Nansha, Guangzhou, Guangdong 511400, China
- \*25P-203** **Physical determinants of multiphase organisation in protein/RNA condensates**  
Pin Yu Chew<sup>1</sup>, Jerelle A. Joseph<sup>2</sup>, Rosana Collepardo-Guevara<sup>1</sup>, Aleks Reinhardt<sup>1</sup>  
<sup>1</sup>Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge, United Kingdom, <sup>2</sup>Department of Chemical and Biological Engineering, Princeton University, Princeton, New Jersey

# Poster Sessions

---

- \*25P-204**    **Molecular determinants of lipid selectivity of VPS13 lipid transport protein**  
Thanchanok Chanachanvong  
Thanchanok Chanachanvong, Puey Ounjai, Tanadet Pipatpolkai
- \*25P-205**    **Ligand dependent conformational plasticity that guides substrate transport cycle of ABC transporters**  
Sungho Bosco Han<sup>1,2</sup>, Jim Warwicker<sup>1</sup>, Hao Fan<sup>2</sup>, Stephen Prince<sup>1</sup>  
<sup>1</sup>The University of Manchester, Manchester, United Kingdom, <sup>2</sup>Agency for Science, Technology and Research (A\*STAR), Singapore
- 25P-206**    **Exploring 3D cell spreading in supramolecular hydrogels and dynamics-induced hydrogel surface reconfiguration through molecular simulations**  
Tianjie Li, Chun Hon Lau, Yi Wang  
Department of Physics, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong, China
- 25P-207**    **The role of computational approaches in uncovering mechanisms of ferroptotic cell death signal**  
Karolina Mikulska-Ruminska  
Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Torun, Poland
- 25P-208**    **Dimerization of APP-C99 using BE-ABMD simulations**  
Shingo Ito<sup>1</sup>, Yuji Sugita<sup>1,2,3</sup>  
<sup>1</sup>RIKEN, Cluster for Pioneering Research, <sup>2</sup>RIKEN, Center for Computational Science, <sup>3</sup>RIKEN, Center for Biosystems Dynamics Research
- 25P-209**    **Computer aided engineering of nonstandard biotechnological enzyme – nitrile hydratase case**  
Lukasz Peplowski  
Department of Biophysics, Nicolaus Copernicus University, Torun, Poland
- 25P-210**    **Why bestatin inhibitor prefers human carnosinase II (CN2) to human carnosinase I (CN1): Simulation study.**  
Borvornwat Toviwek  
Department of Chemistry, Faculty of Science, Kasetsart University, Chatuchak, Bangkok, 10900, Thailand

**25P-211 Computational and Biochemical Studies on the Molecular Interactions Between Melanopsin and its Antagonists**Ruisi Zou<sup>1</sup>, Kohei Obayashi<sup>2</sup>, Hisao Tsukamoto<sup>2</sup>, Toshifumi Mori<sup>1,3</sup><sup>1</sup>Interdisciplinary Graduate School of Engineering Sciences, Kyushu University,<sup>2</sup>Department of Biology, Graduate School of Science, Kobe University, <sup>3</sup>Institute for Materials Chemistry and Engineering, Kyushu University**25P-212 Atom Filtering Algorithm and GPU-Accelerated Calculation of Simulation Atomic Force Microscopy Images**Romain Amyot<sup>1,2</sup>, Noriyuki Kodera<sup>1</sup>, Holger Flechsig<sup>1</sup><sup>1</sup>WPI-NanoLSI, Kanazawa University, Kanazawa, Japan, <sup>2</sup>JSPS International Research Fellow**25P-213 Small GTPase Ran: exploring nucleotide-specific conformations**Erika Balog<sup>1</sup>, Janka Czizgleczki<sup>1</sup>, Balint Dudas<sup>2</sup>,Pedro Tulio de Resende Lara<sup>3</sup>, David Perahia<sup>4</sup>, Hyunbum Jang<sup>5</sup>, Ruth Nussinov<sup>5,6</sup><sup>1</sup>Department of Biophysics and Radiation Biology, Semmelweis University, Budapest, Hungary,<sup>2</sup>Dept of Physics and Astronomy, Faculty of Maths and Physical Sciences, University College London, London, UK,<sup>3</sup>Department of Medical Genetics and Genomic Medicine, School of Medical Sciences, University of Campinas-UNICAMP, Campinas, Brazil,<sup>4</sup>Laboratoire et Biologie et Pharmacologie Appliquée, Ecole Normale Supérieure Paris-Saclay, Gif-sur-Yvette, France,<sup>5</sup>Computational Structural Biology Section, Frederick National Laboratory for Cancer Research in the Cancer Innovation Laboratory, National Cancer Institute, Frederick, MD, USA,<sup>6</sup>Department of Human Molecular Genetics and Biochemistry, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel**25P-214 Large-scale coarse-grained MD simulations for heterogeneous biomolecular systems by efficient parallelization**Jaewoon Jung<sup>1,2</sup>, Cheng Tan<sup>1</sup>, Yuji Sugita<sup>1,2,3</sup><sup>1</sup>RIKEN R-CCS, <sup>2</sup>RIKEN CPR, <sup>3</sup>RIKEN BDR**25P-215 Molecular dynamics simulation of amyloid- $\beta$  aggregates**Hisashi Okumura<sup>1,2,3</sup>, Satoru G. Itoh<sup>1,2,3</sup><sup>1</sup>Exploratory Research Center on Life and Living Systems, <sup>2</sup>Institute for Molecular Science, <sup>3</sup>Graduate Institute for Advanced Studies

# Poster Sessions

---

---

## Computational biology: Biological modeling and simulation

- \*25P-216** **Mathematical model of glioma cell migration and deformation dependent on adhesion dynamics to extracellular matrix**  
Haruna Tagawa<sup>1</sup>, Daisuke Kanematsu<sup>2</sup>, Asako Katsuma<sup>2</sup>, Naoyuki Inagaki<sup>1</sup>, Yonehiro Kanemura<sup>2</sup>, Yuichi Sakumura<sup>1</sup>  
<sup>1</sup>Nara Institute of Science and Technology, Nara, Japan, <sup>2</sup>National Hospital Organization Osaka National Hospital, Osaka, Japan
- \*25P-217** **Reassessing the Exon-Foldon correspondence using Frustration Analysis**  
Ezequiel Alejandro Galpern<sup>1</sup>, Hana Jaafari<sup>2</sup>, Carlos Bueno<sup>2</sup>, Peter G. Wolynes<sup>2</sup>, Diego U. Ferreira<sup>1</sup>  
<sup>1</sup>Protein Physiology Lab, Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales, CONICET - Universidad de Buenos Aires, C1428EGA, Buenos Aires, Argentina, <sup>2</sup>Center for Theoretical Biological Physics, Rice University, Houston, TX 77005
- \*25P-218** **Computational study of the agonism/antagonism effect of small molecules to toll-like receptor (TLR) 7**  
Ruitao Jin, Sitong He, Ben Corry  
Australian National University
- \*25P-219** **Torsion Angles to Map Protein Conformational Changes**  
Katie Blaze O'Flynn<sup>1</sup>, Helen Ginn<sup>1,2</sup>  
<sup>1</sup>Deutsches Elektronen-Synchrotron DESY, Hamburg, Germany, <sup>2</sup>University of Hamburg, Germany
- \*25P-220** **Simulating three dimensional epithelial monolayer tissue deformation using cell center model**  
Tomohiro Mimura, Yasuhiro Inoue  
Department of Micro Engineering, Graduate School of Engineering, Kyoto University, Kyoto, Japan



- \*25P-221**     **Development and validation of novel anticancer drugs against protein kinase D2**  
Ahmed Shemy<sup>1</sup>, Olivia Appelmans<sup>1,3</sup>, Lauren Voets<sup>2</sup>, Johan Van Lint<sup>3</sup>, Wim De Borggraeve<sup>2</sup>, Arnout Voet<sup>1</sup>  
<sup>1</sup>KU Leuven, Department of Chemistry, Biochemistry, Molecular and Structural Biology, Celestijnenlaan 200G - box 2403, B-3001 Leuven, Belgium, <sup>2</sup>KU Leuven, Department of Chemistry, Molecular Design and Synthesis, Celestijnenlaan 200F - box 2404, B-3001 Leuven, Belgium, <sup>3</sup>KU Leuven, Department of Cellular and Molecular Medicine, Laboratory of Protein Phosphorylation and Proteomics, O&N I Herestraat 49 - box 901, B-3000 Leuven, Belgium
- \*25P-222**     **An investigation of the molecular mechanisms underpinning the aggregation of POR-BT isomers within membranes using molecular dynamics simulations**  
Manish Keshewani<sup>1</sup>, Qian Wu<sup>1</sup>, Masayasu Taki<sup>1</sup>, Yoshiki Tanaka<sup>2</sup>, Quan Manh Phung<sup>1</sup>, Sawako Enoki<sup>3</sup>, Yasushi Okada<sup>3,4,5,6</sup>, Shigehiro Yamaguchi<sup>1,2,9</sup>, Florence Tama<sup>1,7,8</sup>  
<sup>1</sup>Institute of Transformative Bio-Molecules, Nagoya University, Nagoya, Japan, <sup>2</sup>Department of Chemistry, Graduate School of Science, Nagoya University, Nagoya, Japan, <sup>3</sup>Department of Physics, and Universal Biology Institute, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Laboratory for Cell Polarity Regulation, RIKEN Center for Biosystems Dynamics Research, Osaka, Japan, <sup>5</sup>Department of Cell Biology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan, <sup>6</sup>International Research Center for Neurointelligence, The University of Tokyo, Tokyo, Japan, <sup>7</sup>Department of Physics, Graduate School of Science, Nagoya University, Nagoya, Japan, <sup>8</sup>Center for Computational Science, RIKEN Kobe, Japan, <sup>9</sup>Integrated Research Consortium on Chemical Sciences, Nagoya University, Nagoya, Japan
- 25P-223**     **Membrane morphology of Clathrin-Mediated Endocytosis**  
Suguru Ushioda, Masashi Tachikawa  
 Tachikawa Lab, Faculty of Science, Yokohama City Univ.
- 25P-224**     **Novel Dengue Vaccine Development – A Multiscale Simulation Study**  
Jan K. Marzinek<sup>1</sup>, Raghuvamsi Palur<sup>1</sup>, Peter Bond<sup>1,2</sup>  
<sup>1</sup>Bioinformatics Institute (A\*STAR), Singapore, <sup>2</sup>Department of Biological Sciences, National University of Singapore, Singapore
- 25P-225**     **Navigating Bio-Systems Through A Deep Learnt Lens-Scape of Multiscale Analytics**  
 Haibin Su  
 The Hong Kong University of Science and Technology

# Poster Sessions

---

---

**25P-226**      **Exploring intermediate states along binding of inhibitors to protein kinases using large-scale molecular dynamics simulations**

Ai Shinobu<sup>1,2</sup>, Suyong Re<sup>3</sup>, Hiraku Oshima<sup>1,4</sup>, Yuji Sugita<sup>1,5,6</sup>

<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Japan, <sup>2</sup>WPI Premium Research Institute for Human Metaverse Medicine, Osaka University, Japan, <sup>3</sup>Artificial Intelligence Center for Health and Biomedical Research, National Institutes of Biomedical Innovation, Health, and Nutrition, Japan, <sup>4</sup>Graduate School of Science, University of Hyogo, Japan, <sup>5</sup>RIKEN Cluster for Pioneering Research, Japan, <sup>6</sup>RIKEN Center for Computational Science, Japan

## Computational biology: machine learning for molecules or cell systems

**\*25P-227**      **Prediction of Olfactory Perception From Learned Molecular Representation**

Zi Hui Lau<sup>1</sup>, Tetsuya J. Kobayashi<sup>2</sup>

<sup>1</sup>Department of Electrical Engineering and Information Systems (EEIS), Graduate School of Engineering, The University of Tokyo, Bunkyo-ku, Tokyo, 113-8656, Japan, <sup>2</sup>Institute of Industrial Science (IIS), The University of Tokyo, Meguro-ku, Tokyo, 153-8505, Japan

**\*25P-228**      **Label-free detection of senescent cells using Raman imaging and machine learning**

Hiroko Kodama<sup>1</sup>, Ren Shibuya<sup>2</sup>, Hiroaki Takahashi<sup>2</sup>, Shinji Kajimoto<sup>1,2,3</sup>, Takakazu Nakabayashi<sup>1,2</sup>

<sup>1</sup>Faculty of Pharmaceutical Science, Tohoku Univ., <sup>2</sup>Graduate School of Pharmaceutical Science, Tohoku Univ., <sup>3</sup>JST PRESTO

## Mathematical & Theoretical biology

**\*25P-229**      **Theory for Optimal Estimation and Control with Resource Limitations in Biological Information Processing**

Takehiro Tottori<sup>1,2</sup>, Tetsuya Kobayashi<sup>2</sup>

<sup>1</sup>Laboratory for Neural Computation and Adaptation, RIKEN Center for Brain Science, <sup>2</sup>Institute of Industrial Science, The University of Tokyo

**Tuesday, June 25**

- \*25P-230**     **Framework for efficient drug selection using machine learning**  
 Shunta Nonaga<sup>1</sup>, Koji Tabata<sup>2,3</sup>, Tamiki Komatsuzaki<sup>1,2,3,4</sup>  
<sup>1</sup>Graduate School of Chemical Sciences and Engineering, Hokkaido University, Sapporo, Japan, <sup>2</sup>Research Center of Mathematics for Social Creativity, Research Institute for Electronic Science, Hokkaido University,, <sup>3</sup>Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido Sapporo, Japan,, <sup>4</sup>The Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan
- \*25P-231**     **THEORETICAL STUDY ON PARTIAL AND TOTAL ADAPTATION OF MULTIPLE TISSUES UNDER FORCE INTERACTION**  
 Ryunosuke Suzuki, Taiji Adachi  
 Kyoto University, Kyoto, Japan
- 25P-232**     **Stoichiometric constraints alter thermodynamic fates of growing systems**  
 Atsushi Kamimura<sup>1</sup>, Yuki Sughiyama<sup>2</sup>, Tetsuya J. Kobayashi<sup>1</sup>  
<sup>1</sup>The University of Tokyo, <sup>2</sup>Tohoku University
- 25P-233**     **Information Geometry of Equilibrium and Nonequilibrium Chemical Reaction Networks**  
 Tetsuya J. Kobayashi<sup>1,2,3</sup>, Dimitri Loutchko<sup>1</sup>, Atsushi Kamimura<sup>1</sup>, Shuhei Horiguchi<sup>2</sup>, Yuki Sughiyama<sup>1</sup>  
<sup>1</sup>Institute of Industrial Science, The University of Tokyo, Japan, <sup>2</sup>Department of Mathematical Informatics, Graduate School of Information Science and Technology, The University of Tokyo, Japan, <sup>3</sup>Universal Biology Institute, The University of Tokyo, Japan

**Ecology & Environment**

- \*25P-234**     **Mutual Reinforcement Between Spatial Structure and Species Coexistence in a Living Soil Model**  
 Riz Fernando Noronha, Kim Sneppen, Kunihiko Kaneko  
 Niels Bohr Institute, Copenhagen, Denmark

# Poster Sessions

## Nonequilibrium state & Biological rhythm

**\*25P-235 Mechanism of scaling behavior of an intracellular reaction-diffusion wave in cell-size space**

Sakura Takada<sup>1</sup>, Shunshi Kohyama<sup>2</sup>, Natsuhiko Yoshinaga<sup>3,4</sup>,  
Nobuhide Doi<sup>1</sup>, Kei Fujiwara<sup>1</sup>

<sup>1</sup>Dept. of Biosci. and Info., Keio Univ., Yokohama, Japan, <sup>2</sup>Max Planck Inst. of Biochem., Martinsried, Germany, <sup>3</sup>AIMR, Tohoku Univ., Sendai, Japan, <sup>4</sup>MathAM-OIL, AIST, Sendai, Japan

**25P-236 Chaotic Oscillations of Sarcomeres within Cardiomyocytes Induced by Calcium Fluctuations: Identification and Physiological Significance of 'S4C'**

Seine A. Shintani<sup>1,2,3</sup>

<sup>1</sup>Department of Biomedical Sciences, College of Life and Health Sciences, Chubu University, <sup>2</sup>Center for Mathematical Science and Artificial Intelligence, Chubu University, <sup>3</sup>Institute for Advanced Research, Nagoya University, Nagoya

## Measurements

**\*25P-237 Quantitative correspondence between drug-response curves in the REMA test measured fluorometrically and colourimetrically**

Alexander V. Sychev<sup>1</sup>, Anastasia Lavrova<sup>2</sup>, Eugene Postnikov<sup>1</sup>

<sup>1</sup>Kursk State University, <sup>2</sup>Saint-Petersburg State Research Institute of Phthisiopulmonology

**\*25P-238 Development of a dual-luciferase indicator for 'Mix-and-read' detection of Cu<sup>2+</sup>**

Ti Wu<sup>1,2</sup>, Mitsuru Hattori<sup>1</sup>, Takeharu Nagai<sup>1,2</sup>

<sup>1</sup>SANKEN, Osaka University, Japan, <sup>2</sup>Graduate school of Pharmaceutical Sciences, Osaka University, Japan

**\*25P-239 Combined analysis of static and dynamic cell-mechanics with unbiased transcriptomics for thousands of single cells**

Akifumi Shiomi<sup>1,3</sup>, Taikopaul Kaneko<sup>2</sup>, Kaori Nishikawa<sup>1</sup>, Dino Di Carlo<sup>3,4,5,6</sup>, Hirofumi Shintaku<sup>1,2</sup>

<sup>1</sup>Cluster for Pioneering Research, RIKEN, Japan, <sup>2</sup>Institute for Life and Medical Sciences, Kyoto University, Japan, <sup>3</sup>Department of Bioengineering, University of California, USA, <sup>4</sup>California NanoSystems Institute, USA, <sup>5</sup>Jonsson Comprehensive Cancer Center, USA, <sup>6</sup>Department of Mechanical Engineering, University of California, Los Angeles, USA

**25P-240 Nanoendoscopy-AFM measurement of nuclear stiffness in living different metastatic cancer cells**

Takehiko Ichikawa<sup>1</sup>, Kundan Sivashanmugan<sup>2</sup>, Takeshi Shimi<sup>1,3</sup>, Kojiro Ishibashi<sup>3</sup>, Takeshi Yoshida<sup>1,4</sup>, Akiko Kudo<sup>1</sup>, Eishu Hirata<sup>1,3</sup>, Rikinari Hanayama<sup>1,4</sup>, Hiroshi Kimura<sup>5,6</sup>, Takeshi Fukuma<sup>1,7</sup>

<sup>1</sup>Nano Life Science Institute (WPI-NanoLSI), <sup>2</sup>University of Maryland School of Medicine, <sup>3</sup>Cancer Research Institute, Kanazawa University, <sup>4</sup>Kanazawa University Graduate School of Medical Sciences, <sup>5</sup>Institute of Innovative Research, Tokyo Institute of Technology, <sup>6</sup>Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, <sup>7</sup>Division of Nano Life Science, Kanazawa, University

**25P-241 Enzyme reaction measurement using graphene biosensors and its application to SARS-CoV-2 detection**

Takao Ono<sup>1</sup>, Yohei Watanabe<sup>2</sup>, Shin-ichi Nakakita<sup>3</sup>, Yasushi Kanai<sup>1,4</sup>, Naruto Miyakawa<sup>5</sup>, Ayumi Shinagawa<sup>5</sup>, Shota Ushiba<sup>5</sup>, Shinsuke Tani<sup>5</sup>, Yasuo Suzuki<sup>6</sup>, Masahiko Kimura<sup>5</sup>, Daichi Chiba<sup>1,4,7,8</sup>, Kazuhiko Matsumoto<sup>1</sup>

<sup>1</sup>SANKEN, Osaka Univ., Osaka, Japan, <sup>2</sup>Kyoto Pref. Univ. Med., Kyoto, Japan, <sup>3</sup>Kagawa Univ., Kagawa, Japan, <sup>4</sup>SRIS, Tohoku Univ., Sendai, Japan, <sup>5</sup>Murata Manufacturing Co., Ltd., Kyoto, Japan, <sup>6</sup>Univ. Shizuoka, Shizuoka, Japan, <sup>7</sup>OTRI, Osaka Univ., Osaka, Japan, <sup>8</sup>CSRN, Osaka Univ., Osaka, Japan

**25P-242 Construction 4 channels polarization-dependent fluorescence correlation spectroscopy for detection of protein interaction.**

Masataka Kinjo, Riku Ando, Akira Kitamura  
Hokkaido University, Sapporo, Japan.

**Bioimaging****\*25P-243 Development of luminescent glucose sensor and its application**

Tanaka Rikuto<sup>1</sup>, Sugiura Kazunori<sup>2</sup>, Hattori Mitsuru<sup>2</sup>, Nagai Takeharu<sup>1,2</sup>

<sup>1</sup>Graduate School of Frontier Biosciences, Osaka University, <sup>2</sup>SANKEN, Osaka University

**\*25P-244 Quantitative chemical and physical imaging of heterochromatin in a living cell using Raman-Brillouin microscopy**

Masato Machida<sup>1</sup>, Atsushi Shibata<sup>2</sup>, Kentaro Fujii<sup>3</sup>, Shinji Kajimoto<sup>1,4</sup>, Takakazu Nakabayashi<sup>1</sup>

<sup>1</sup>Graduate School of Pharmaceutical Sciences, Tohoku University, <sup>2</sup>Division of Molecular Oncological Pharmacy, Keio University Faculty of Pharmacy, <sup>3</sup>QST, <sup>4</sup>JST PRESTO

## Poster Sessions

---

- \*25P-245** **Investigating the Mechanical Properties and Dynamics of Focal Adhesions in Living Cells by Nanoendoscopy-AFM Technique**  
Alam Mohammad Shahidul, Tetsuya Shirokawa, Takehiko Ichikawa, Clemens M. Franz, Takeshi Fukuma  
Nano Life Science Institute, Kanazawa University
- \*25P-246** **Native molecular properties of full-length SARS-CoV-2 Open Reading Frame 6 (ORF6) protein observed using HS-AFM**  
Goro Nishide<sup>1</sup>, Keesiang Lim<sup>2</sup>, Maiki Tamura<sup>3</sup>, Akiko Kobayashi<sup>4</sup>, Qingci Zhao<sup>3</sup>, Masaharu Hazawa<sup>2,4</sup>, Toshio Ando<sup>2</sup>, Noritaka Nishida<sup>3</sup>, Richard W. Wong<sup>2,4</sup>  
<sup>1</sup>Division of Nano Life Science in the Graduate School of Frontier Science Initiative, WISE Program for Nano-Precision Medicine, Science, and Technology Kanazawa University, Kanazawa, Japan, <sup>2</sup>WPI-Nano Life Science Institute, Kanazawa University, Kanazawa, Japan, <sup>3</sup>Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, Japan, <sup>4</sup>Cell-Bionomics Research Unit, Institute for Frontier Science Initiative, Kanazawa University, Kanazawa, Japan
- \*25P-247** **Shannon entropy and complexity in describing and visualizing the chemical diversity of surrounding cells by mass spectrometry imaging techniques**  
Lili Xu<sup>1</sup>, Manabu Machida<sup>2</sup>, Tomoaki Kahyo<sup>1</sup>, Mitsutoshi Setou<sup>1</sup>  
<sup>1</sup>Hamamatsu University School of Medicine, Hamamatsu, Japan, <sup>2</sup>Kindai University, Higashi-Hiroshima, Japan
- \*25P-248** **Label-free detection of supersulfides in a living cell using Raman microscopy**  
Keisuke Koga<sup>1</sup>, Shinji Kajimoto<sup>1,2</sup>, Shinya Tahara<sup>1</sup>, Tomohiro Konno<sup>1</sup>, Takakazu Nakabayashi<sup>1</sup>  
<sup>1</sup>Graduate School of Pharmaceutical Sciences, Tohoku University, <sup>2</sup>JST PRESTO
- \*25P-249** **Mechanical properties of human platelets in biochemical confinement**  
Vincent Gidlund, Jan Seifert, Johanna Rodriguez, Carmela Rianna, Tilman E. Schäffer  
Institute of Applied Physics, University of Tübingen, Tübingen, Germany

## Tuesday, June 25

**\*25P-250** **Oblique Line Scan Illumination Enables Expansive, Accurate and Sensitive Single Protein Measurements in Solution and in Living Cells**

Amine Driouchi<sup>1</sup>, Mason Bretan<sup>1</sup>, Brynmor Davis<sup>1</sup>, Alec Heckert<sup>1</sup>, Markus Seeger<sup>1</sup>, Maité Bradley Silva<sup>1</sup>, William Forrest<sup>1</sup>, Jessica Hsiung<sup>1</sup>, Jiongyi Tan<sup>1</sup>, Hongli Yang<sup>1</sup>, Eric Betzig<sup>2</sup>, Xavier Darzacq<sup>2</sup>, Russ Berman<sup>1</sup>, Daniel Anderson<sup>1</sup>

<sup>1</sup>Eikon Therapeutics, <sup>2</sup>University of California Berkeley

**\*25P-251** **Characterization of a novel membrane voltage sensor in the bacterial flagellar type III export apparatus**

Sakata Kai<sup>1</sup>, Minamino Tohru<sup>2</sup>, Morimoto Yusuke<sup>3</sup>

<sup>1</sup>Grad. Sch. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Fukuoka, Japan, <sup>2</sup>Grad. Sch. Front. Biosci., Osaka Univ., Osaka, Japan, <sup>3</sup>Dept. Phys. and Info. Eng., Fac. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Fukuoka, Japan

**25P-252** **Atomic force microscopy (AFM)-based nanoindentation of the RSJ2 Ralstonia phage**

Udom Sae-Ueng<sup>1</sup>, Chooseel Bunsuwansakul<sup>1</sup>, Namthip Phironrit<sup>1</sup>, Christian Nehls<sup>2,3</sup>

<sup>1</sup>National Science and Technology Development Agency, Pathum Thani, Thailand, <sup>2</sup>Research Center Borstel - Leibniz Lung Center, Borstel, Germany, <sup>3</sup>Centre for Structural Systems Biology, Hamburg, Germany

**25P-254** **Scanning-free functional Fluorescence Microscopy Imaging Toward Spatial Mapping of Biomolecular Information in Live Cell**

Sho Oasa<sup>1</sup>, Aleksandar Krmpot<sup>2,3</sup>, Stanko Nikolic<sup>2,3</sup>, Andrew Clayton<sup>4</sup>, Igor Tsigelny<sup>5</sup>, Jean-Pierre Changeux<sup>6</sup>, Lars Terenius<sup>1</sup>, Milivoj Belic<sup>3</sup>, Rudolf Rigler<sup>7</sup>, Vladana Vukojevic<sup>1</sup>

<sup>1</sup>Department of Clinical Neuroscience (CNS), Karolinska Institutet, Stockholm, Sweden, <sup>2</sup>Institute of Physics Belgrade, University of Belgrade, Belgrade, Serbia, <sup>3</sup>Division of Arts and Sciences, Texas A&M University at Qatar, Doha, Qatar, <sup>4</sup>Optical Science Centre, Department of Physics and Astronomy, School of Science, Swinburne University of Technology, Melbourne, Australia, <sup>5</sup>Department of Neurosciences, University of California San Diego, CA, USA, <sup>6</sup>Department of Neuroscience, Unité Neurobiologie Intégrative des Systemés, Institut Pasteur, Paris, France, <sup>7</sup>Department of Medical Biochemistry and Biophysics (MBB), Karolinska Institutet, Stockholm, Sweden

**25P-255** **Characteristics of extracellular collagen in cartilage revealed by polarization-resolved second harmonic generation imaging**

Ming-Xin Lee

Institute of Translational Medicine and New Drug Development

# Poster Sessions

## Bioengineering

- \*25P-256** **Exploring Biological Changes in Whole and Serum Blood of Healthy and Diabetic Patients Using Drying Droplets**  
Anusuya Pal<sup>1</sup>, Amalesh Gope<sup>2</sup>, Miho Yanagisawa<sup>1</sup>  
<sup>1</sup>Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Department of Linguistics and Language Technology, Tezpur University, Tezpur, Assam, India
- \*25P-257** **Fabrication of a Nanobody-based Ratiometric Bioluminescent Immunosensor for Point-of-care Testing**  
Yinghui Yang<sup>1</sup>, Akihito Inoue<sup>1</sup>, Takanobu Yasuda<sup>2</sup>, Hiroshi Ueda<sup>2</sup>, Bo Zhu<sup>2</sup>, Tetsuya Kitaguchi<sup>2</sup>  
<sup>1</sup>Graduate School of Life Science and Technology, Tokyo Institute of Technology, Kanagawa, Japan, <sup>2</sup>Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, Kanagawa, Japan
- \*25P-258** **High-throughput nano/micro biological particle analyzer with unsupervised denoising for enhanced sensitivity**  
Yuichiro Iwamoto<sup>1</sup>, Benjamin Salmon<sup>2</sup>, Yusuke Yoshioka<sup>3</sup>, Bin Xu<sup>1</sup>, Ryosuke Kojima<sup>1</sup>, Alexander Krull<sup>2</sup>, Sadao Ota<sup>1</sup>  
<sup>1</sup>The University of Tokyo, Tokyo, Japan, <sup>2</sup>University of Birmingham, Birmingham, United Kingdom, <sup>3</sup>Tokyo Medical University, Tokyo, Japan
- \*25P-259** **Multicolor autonomous bioluminescence imaging based on bacterial bioluminescence system**  
Subhan Hadi Kusuma<sup>1,2</sup>, Mitsuru Hattori<sup>2</sup>, Takeharu Nagai<sup>1,2</sup>  
<sup>1</sup>Graduate School of Frontier Bioscience, Osaka University, Japan, <sup>2</sup>SANKEN, Osaka University, Japan
- 25P-260** **Isolation of novel fluorogenic RNA aptamers via affinity- and fluorescence-based in vitro selection**  
Ryo Iizuka<sup>1</sup>, Keisuke Ito<sup>1</sup>, Tomotaka Tayama<sup>1</sup>, Sotaro Uemura<sup>1,2</sup>  
<sup>1</sup>Department of Biological Sciences, Graduate School of Science, The University of Tokyo, <sup>2</sup>Core Research for Evolutional Science and Technology (CREST), Japan Science and Technology Agency



## Tuesday, June 25

### Crystal growth & Crystallization technique

- \*25P-261** **Protein – calixarene crystal engineering**  
 Niamh Maria Mockler<sup>1</sup>, Kiefer Ramberg<sup>1</sup>, Colin Raston<sup>2</sup>, Peter Crowley<sup>1</sup>  
<sup>1</sup>School of Biological and Chemical Sciences, University of Galway, H91 TK33, Galway, Ireland, <sup>2</sup>Flinders University, Adelaide, Australia.
- \*25P-262** **Investigation of crystallization of crystallized protein expressed using E. coil**  
 Yume Kosuge, Koki Kamiya  
 Graduate School of Science and Technology, Gunma University, Kiryu, Gunma, Japan

### Virus structure, function, SARS-CoV-2

- \*25P-263** **Study of the binding site dynamics, druggability and cryptic pocket formation in different human coronaviruses' main protease (Mpro)**  
 Ahmed Adel Ezat  
 Biophysics Department, Faculty of Science, Cairo University, 21613 Giza, Egypt
- \*25P-264** **Cryo-EM structure of the Borna disease virus 1 RNA-free nucleoprotein complex**  
 Shinya Goto<sup>1,2</sup>, Yuya Hirai<sup>3</sup>, Keizo Tomonaga<sup>4,5,6</sup>, Takeshi Noda<sup>1,2</sup>, Masayuki Horie<sup>7,8</sup>, Yukihiko Sugita<sup>1,2,9</sup>  
<sup>1</sup>Laboratory of Ultrastructural Virology, Institute for Life and Medical Sciences, Kyoto University, <sup>2</sup>Laboratory of Ultrastructural Virology, Graduate School of Biostudy, Kyoto University, <sup>3</sup>Department of Biology, Osaka Dental University, <sup>4</sup>Laboratory of RNA viruses, Institute for Life and Medical Sciences, Kyoto University, <sup>5</sup>Laboratory of RNA Viruses, Graduate School of Biostudy, Kyoto University, <sup>6</sup>Laboratory of Molecular Virology, Graduate School of Medicine, Kyoto University, <sup>7</sup>Laboratory of Veterinary Microbiology, Graduate School of Veterinary Science, Osaka Metropolitan University, <sup>8</sup>Osaka International Research Center for Infectious Diseases, Osaka Metropolitan University, <sup>9</sup>Hakubi Center for Advanced Research, Kyoto University
- 25P-266** **Unraveling the Dynamics of SARS-CoV-2 Spike: From Glycosylation States to Cryptic Pockets and Antibody Binding**  
 Mohd Firdaus Samsudin<sup>1</sup>, Lorena Zuzic<sup>1</sup>, Palur Raghuvamsi<sup>1,2</sup>, Aishwary Shivgan<sup>1</sup>, Nikhil Tulsian<sup>2</sup>, Himanshi Chawla<sup>3</sup>, Joel Allen<sup>3</sup>, Max Crispin<sup>3</sup>, Paul MacAry<sup>4</sup>, Ganesh Anand<sup>5</sup>, Peter Bond<sup>1,2</sup>  
<sup>1</sup>Bioinformatics Institute, A\*STAR, Singapore, <sup>2</sup>Dept. of Biological Sciences, NUS, Singapore, <sup>3</sup>School of Biological Sciences, University of Southampton, Southampton, UK, <sup>4</sup>Life Sciences Institute, NUS, Singapore, <sup>5</sup>Dept. of Chemistry, The Pennsylvania State University, PA, USA

# Poster Sessions

## Mechanosensing and Mechanobiology, Biological Temperature

- \*25P-267** Development of a high-frequency focused ultrasound system for applying noninvasively localized mechanical stimulation to cells in culture

Natsumi Fujiwara, Shao Ying Tan, Akira Nagakubo, Masahiro Kino-oka, Hirotsugu Ogi

Graduate School of Engineering, Osaka University, Japan

- 25P-268** Force transmission by retrograde actin flow-induced dynamic stretching of Talin

Sawako Yamashiro<sup>1,2</sup>, David Rutkowski<sup>3</sup>, Kelli Ann Lynch<sup>3,4</sup>, Ying Liu<sup>1</sup>, Dimitrios Vavylonis<sup>3</sup>, Naoki Watanabe<sup>1,2</sup>

<sup>1</sup>Laboratory of Single-Molecule Cell Biology, Kyoto University Graduate School of Biostudies, Kyoto, Japan, <sup>2</sup>Department of Pharmacology, Kyoto University Graduate School of Medicine, Kyoto, Japan, <sup>3</sup>Department of Physics, Lehigh University, Bethlehem, PA, USA, <sup>4</sup>University of South Florida, Tampa, FL, USA

- 25P-269** Modulating E-Cadherin Engagement to Alter Cell Junctional Tension in Spheroids

Seongho Kim, Isaac T.S. Li

Department of Chemistry, The University of British Columbia, Canada

## Biophysics of disease

- \*25P-270** Opportunities of Raman spectroscopy in pulmonary arterial hypertension

Elvin Suleyman oglu Allakhverdiev<sup>1</sup>, Olga Slatinskaya<sup>2</sup>, Oleg Rodnenkov<sup>1</sup>, Tamila Martynyuk<sup>1</sup>, Georgy Maksimov<sup>2</sup>

<sup>1</sup>National Medical Research Center of Cardiology named after academician E.I. Chazov of Ministry of Health of the Russian Federation, <sup>2</sup>Faculty of Biology, Department of Biophysics Lomonosov Moscow State University, Moscow, Russian Federation

**Tuesday, June 25****\*25P-271 Exploring Dapagliflozin Therapy Effects on Nanomechanics and Morphology of Red Blood Cells in Type I Diabetes Mellitus**

Patrycja Lidia Twardawa<sup>1,2</sup>, Bartłomiej Matejko<sup>3</sup>, Agata Kubisiak<sup>1,2</sup>, Katarzyna Cyranka<sup>3,4</sup>, Tomasz Klupa<sup>3,4</sup>, Marta Targosz-Korecka<sup>1</sup>

<sup>1</sup>Jagiellonian University, Faculty of Physics, Astronomy and Applied Computer Science, M. Smoluchowski Institute of Physics, Kraków, Poland, <sup>2</sup>Jagiellonian University, Doctoral School of Exact and Natural Sciences, Kraków, Poland, <sup>3</sup>University Hospital in Kraków, Kraków, Poland, <sup>4</sup>Jagiellonian University Medical College, Department of Metabolic Diseases, Kraków, Poland

**25P-272 Opposite effects of extracellular chloride and pH on closely related CIC-6 and CIC-7 transporters suggest non-overlapping function in endo-lysosomes**

Maria Antonietta Coppola<sup>1</sup>, Paola Gavazzo<sup>1</sup>, Ilaria Zanardi<sup>1</sup>, Abraham Tettey-Matey<sup>1</sup>, Antonella Liantonio<sup>2</sup>, Paola Imbrici<sup>2</sup>, Peking Fong<sup>3</sup>, Michael Pusch<sup>1</sup>

<sup>1</sup>Institute of Biophysics, CNR, Genoa, Italy, <sup>2</sup>Department of Pharmacy–Drug Sciences, University of Bari “Aldo Moro”, Bari, Italy, <sup>3</sup>Department of Anatomy and Physiology, Kansas State University College of Veterinary Medicine, Manhattan, KS, USA

**Miscellaneous topics****\*25P-273 Structural and Magneto Absorption Study of Hard and Soft Ferrite**

Usha Praveena V J

Department of Physics, St. Francis College for Women, Hyderabad-500 016, Telangana, India

**25P-274 FUNCTIONALIZED CNT AND ACTIVATED CARBON**

Shikha Chander<sup>1</sup>, Meenu Mangal<sup>2</sup>

<sup>1</sup>St. Francis Degree & Postgraduate Women’s College, Begumpet 500016, Hyderabad, Telangana, India, <sup>2</sup>Poddar International College, Mansarovar, Jaipur-302020, Rajasthan, India,

**Single Molecule Biophysics****25P-275 Quantifying ligand binding kinetics in G-quadruplex DNA with fluorescence lifetime correlation analyses**

Chao-Han Cheng, Chih-Chieh Ko, Yong-Zhan Hong, Chung-Chieh Wu  
Department of Applied Chemistry, National Pingtung University, Pingtung, Taiwan

# Poster Sessions

---

---

## Cell biology: Motility

**25P-276** Inference of cellular traction forces using temporal information

Kazuko Hamaoka, Hirokazu Tanimoto  
Grad. Sch. Nanobioscience, Yokohama City Univ.

## Computational biology: Molecular simulation

**25P-277** Secondary Proton Transfer in the Qo Site of Cytochrome bc<sub>1</sub>

Guilherme M. Arantes, Sofia Camilo  
Department of Biochemistry, Instituto de Quimica, Universidade de Sao Paulo, Brazil

## Computational biology: Biological modeling and simulation

**25P-278** Phase-field model of Dictyostelium fruiting body formation

Seiya Nishikawa<sup>1</sup>, Satoshi Kuwana<sup>1</sup>, Gen Honda<sup>1,2</sup>, Satoshi Sawai<sup>1,3</sup>,  
Shuji Ishihara<sup>1,3</sup>

<sup>1</sup>Graduate School of Arts and Sciences, University of Tokyo, <sup>2</sup>Komaba Institute for Science, University of Tokyo, <sup>3</sup>Universal Biology Institute, University of Tokyo

**25P-279** Topography-mediated cell communication

Aleksandra Ardaševa<sup>1</sup>, Varun Venkatesh<sup>1</sup>, Daiki Matsunaga<sup>2</sup>,  
Shinji Deguchi<sup>2</sup>, Amin Doostmohammadi<sup>1</sup>

<sup>1</sup>Niels Bohr Institute, University of Copenhagen, Denmark, <sup>2</sup>Division of Bioengineering, Graduate School of Engineering Science, Osaka University, Japan

## Mathematical & Theoretical biology

**25P-280** Latecomer Killing: Elaborate Response in Yeast Communities

Tetsuhiro S. Hatakeyama<sup>1</sup>, Kunihiko Kaneko<sup>2</sup>, Kunihiro Ohta<sup>3</sup>, Miki Tamura<sup>3</sup>,  
Arisa Oda<sup>3</sup>

<sup>1</sup>Earth Life Science Institute (ELSI), Tokyo Institute of Technology, <sup>2</sup>Niels Bohr Institute, Copenhagen University, <sup>3</sup>Department of Basic Science, The University of Tokyo

## Biophysics of disease

- 25P-281**      **Reinstating heart rate variability improves cardiac output in heart failure - novel insights from proteomics**  
David Crossman<sup>1</sup>, George Guo<sup>1</sup>, Julia Shanks<sup>1</sup>, Jizhong Bai<sup>1</sup>, Martin Middleditch<sup>2</sup>, Gus Grey<sup>1</sup>, Julian Paton<sup>1</sup>, Rohit Ramchandra<sup>1</sup>  
<sup>1</sup>Manaaki Manawa—The Centre for Heart Research, Department of Physiology, University of Auckland, 85 Park Road, Grafton, Auckland, 1023, New Zealand, <sup>2</sup>Auckland Science Analytical Services, Faculty of Science, University of Auckland, 23 Symonds Street, Auckland Central, Auckland, 1010, New Zealand.
- 25P-282**      **Development of the two-fingered microhand and micro fluidic system for measuring the mechanical properties of cell**  
Masaru Kojima<sup>1</sup>, Masahiro Totani<sup>1</sup>, Masahiro Kawakami<sup>1</sup>, Toshihiko Ogura<sup>2</sup>, Tatsuo Arai<sup>3</sup>  
<sup>1</sup>Osaka University, <sup>2</sup>Tohoku University, <sup>3</sup>The University of Electro-Communications
- 25P-283**      **Targeting Retinal Angiogenesis: Potential of AT11-L0 Aptamer for Drug Delivery**  
David Moreira<sup>1,2</sup>, Jessica Lopes-Nunes<sup>2</sup>, Fátima Santos<sup>3</sup>, Maria Oliveira<sup>4,5</sup>, António Paulo<sup>4,5</sup>, Maria Campello<sup>4,5</sup>, Carla Cruz<sup>1,2</sup>, Cândida Ascensão Teixeira Tomaz<sup>1,2</sup>  
<sup>1</sup>Departamento de Química, Universidade da Beira Interior, Covilhã, Portugal, <sup>2</sup>CICS-UBI—Health Sciences Research Centre, Universidade da Beira Interior, Covilhã, Portugal, <sup>3</sup>Functional Proteomics Laboratory, Centro Nacional de Biotecnología (CSIC), Madrid, Spain,, <sup>4</sup>Centro de Ciências e Tecnologias Nucleares, Instituto Superior Técnico, Universidade Lisboa, Portugal, <sup>5</sup>Departamento de Engenharia e Ciências Nucleares, Instituto Superior Técnico, Universidade Lisboa, Portugal

# Poster Sessions

# Wednesday, June 26

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

**\*26P-001    Unravelling Protein Complexity with 3Di-based Structural Entropy**

Zecheng Zhang, Qian-Yuan Tang

Hong Kong Baptist University

**\*26P-002    Frustration-Fluctuation Correspondence in Enzymes**

Yuxiang Zheng, Qian-Yuan Tang

Hong Kong Baptist University

**\*26P-003    Cryo-EM Structure of the hERG Channel Complexed with a K+ Channel Blocker**

Yasuomi Miyashita<sup>1,2</sup>, Toshio Moriya<sup>3</sup>, Masato Kawasaki<sup>3</sup>, Satoshi Ogasawara<sup>2</sup>, Naruhiko Adachi<sup>3</sup>, Satoshi Yasuda<sup>2</sup>, Tetsuichiro Saito<sup>1</sup>, Toshiya Senda<sup>3</sup>, Takeshi Murata<sup>2</sup>

<sup>1</sup>Developmental Biology, Graduate School of Medicine, Chiba University, <sup>2</sup>Membrane Protein Research Center, Graduate School of Science, Chiba University, <sup>3</sup>Structural Biology Research Center, Institute of Materials Structure Science, High Energy Accelerator Research Organization

## Wednesday, June 26

- \*26P-004** **Crystal Structure of Pectocin M1 from *Pectobacterium carotovorum*: Unveiling Diverse Conformations and Binding Interactions during the Initial Step of Pectocin M Uptake through the Ferredoxin Uptake System**  
Nawee Jantarit<sup>1,2</sup>, Hideaki Tanaka<sup>1</sup>, Genji Kurisu<sup>1,2</sup>  
<sup>1</sup>Protein Crystallography Laboratory, Institute for Protein Research, Osaka University, Suita, Osaka Japan, <sup>2</sup>Department of Macromolecular Sciences, Graduate School of Science, Osaka University, Toyonaka, Osaka, Japan
- \*26P-005** **Symmetry Matched Protein – Macrocycle Assembly**  
Colin Wren<sup>1</sup>, Ronan J. Flood<sup>1</sup>, Niamh M. Mockler<sup>1</sup>, Martin Savko<sup>2</sup>, Qiang Shi<sup>3</sup>, Peter B. Crowley<sup>1</sup>  
<sup>1</sup>School of Biological and Chemical Sciences, University of Galway, H91 TK33, Galway, Ireland, <sup>2</sup>Synchrotron SOLEIL, L'Orme des Merisiers, Saint-Aubin, 91191, Gif-sur-Yvette, France, <sup>3</sup>Advanced Materials Institute, Qilu University of Technology, Shandong Academy of Sciences, Jinan, 250014 P. R. China
- \*26P-006** **Structure of *Francisella tularensis* subsp. *novicida* Cas9 in the catalytically poised state**  
Shinsuke Higashiyama, Ryoya Nakagawa, Hisato Hirano, Osamu Nureki  
Department of Biological Sciences, Graduate School of Science, University of Tokyo, Tokyo, Japan
- \*26P-007** **Cryo-EM structure of a photosystem I supercomplex from oleaginous green alga *Coccomyxa subellipsoidea***  
Pi-Cheng Tsai, Fusamichi Akita, Jian-Ren Shen  
Research Institute for Interdisciplinary Science, Okayama University, Okayama, Japan
- \*26P-008** **Structural analysis of the photosystem I-light harvesting I supercomplex from a cryptophyte alga *Rhodomonas* sp.**  
Wenyue Zhang  
Graduate school of natural science and technology & Research Institute for Interdisciplinary Science, Okayama University, Okayama, Japan.
- \*26P-009** **Structural analysis of brain-associated proteins in complex with novel PET radiotracers**  
Kaede Goto<sup>1</sup>, Junta Tomono<sup>1</sup>, Shozo Furumoto<sup>2</sup>, Nobuyuki Okamura<sup>3</sup>, Ryuichi Harada<sup>3</sup>, Takeshi Yokoyama<sup>1</sup>, Yoshikazu Tanaka<sup>1</sup>  
<sup>1</sup>Grad. Sch. Life Sci., Tohoku Univ., Miyagi, Japan., <sup>2</sup>Grad. Sch. CYRIC., Tohoku Univ., Miyagi, Japan., <sup>3</sup>Grad Sch. Med. & Pharm., Tohoku Med & Pharm Univ., Miyagi, Japan.

## Poster Sessions

---

---

- 26P-010**      **Cryo-EM structure of the zinc-activated channel (ZAC) in the Cys-loop receptor superfamily**  
Fei Jin<sup>1</sup>, Yi-Yu Lin<sup>2</sup>, Ru-Chun Wang<sup>2</sup>, Yimeng Zhao<sup>1</sup>, Cheng Shen<sup>1</sup>,  
Danqi Sheng<sup>1</sup>, Muneyoshi Ichikawa<sup>1</sup>, Ye Yu<sup>2</sup>, Jin Wang<sup>2</sup>, Motoyuki Hattori<sup>1</sup>  
<sup>1</sup>Fudan University, Shanghai, China, <sup>2</sup>China Pharmaceutical University, Nanjing, China
- 26P-011**      **The conformation and its thermal stability of antibiotic peptide alamethicin in alcohol solution studied by NMR**  
Yoshinori Miura  
Center for Advanced Instrumental Analysis, Kyushu University
- 26P-012**      **A novel blue-carotenoprotein from sponge**  
Momose Kuroda<sup>1</sup>, Yui Fujita<sup>1</sup>, Momoko Ishida<sup>1</sup>, Satoko Matsunaga<sup>1</sup>,  
Mitsuru Jimbo<sup>2</sup>, Takeshi Yokoyama<sup>3</sup>, Yoshikazu Tanaka<sup>3</sup>, Ryuichi Sakai<sup>4</sup>  
<sup>1</sup>NIT, Hakodate College, <sup>2</sup>Kitasato Univ., Sch. Marine Biosci., <sup>3</sup>Grad. Sch. Life Sci.,  
Tohoku Univ., <sup>4</sup>Fac. & Grad. Sch. Fish. Sci., Hokkaido Univ.
- 26P-013**      **Structure-activity Relationship of a novel enzyme derived from marine Streptomyces**  
Takumi Oshiro<sup>1</sup>, Shuta Uehara<sup>1</sup>, Yoshikazu Tanaka<sup>2</sup>, Takuya Ito<sup>3</sup>,  
Yoshio Kodera<sup>1,4</sup>, Takashi Matsui<sup>1,4</sup>  
<sup>1</sup>Grad. Sch. Sci., Kitasato Univ., <sup>2</sup>Grad. Sch. Life Sci. Tohoku Univ., <sup>3</sup>Fac. of Pharm.,  
Osaka Ohtani Univ., <sup>4</sup>Center for Disease Proteomics, Sch. Sci., Kitasato Univ.

### Protein: Structure & Function

- \*26P-015**      **Proton conduction mechanism in FO rotary motor studied by quantum molecular dynamics simulation**  
Yukinari Kamiyama<sup>1</sup>, Dan Parkin<sup>2</sup>, Junichi Ono<sup>2</sup>, Yoshifumi Nishimura<sup>2</sup>,  
Hiromi Nakai<sup>1,2</sup>, Mitsunori Takano<sup>1,2</sup>  
<sup>1</sup>Grad. Sci. Adv. Sci. & Eng., Waseda Univ., Tokyo, Japan, <sup>2</sup>Waseda Res. Inst. for Sci.  
& Eng., Waseda Univ., Tokyo, Japan



## Wednesday, June 26

- \*26P-016** **Time-resolved crystallography for the study of a B12-dependent photoreceptor using X-ray free-electron lasers**  
Ronald Rios Santacruz<sup>1</sup>, Giorgio Schiro<sup>1</sup>, David Leys<sup>2</sup>, Nigel Scrutton<sup>2</sup>, Toshi Takehiko<sup>3</sup>, Kensuke Tono<sup>3</sup>, Derren Heyes<sup>2</sup>, Harshwardhan Poddar<sup>2</sup>, Martin Weik<sup>1</sup>  
<sup>1</sup>Univ. Grenoble Alpes, CEA, CNRS, Institut de Biologie Structurale, F-38044 Grenoble, France, <sup>2</sup>Manchester Institute of Biotechnology, Department of Chemistry, University of Manchester, United Kingdom, <sup>3</sup>RIKEN SPring-8 Center, 1-1-1 Kouto, Sayo, Hyogo 679-5148, Japan.
- \*26P-017** **Heterogeneity of Microtubule Lattices Revealed by Cryo-ET and Non-averaging Structural Analysis**  
Hanjin Liu<sup>1</sup>, Hiroshi Yamaguchi<sup>2</sup>, Masahide Kikkawa<sup>2</sup>, Tomohiro Shima<sup>1</sup>  
<sup>1</sup>Graduated School of Science, The University of Tokyo, Japan, <sup>2</sup>Graduated School of Medicine, The University of Tokyo, Japan
- \*26P-018** **Structural-dynamics insight of an alligator-derived antimicrobial peptide, AsCATH5, in interaction with membrane mimetics as revealed by solution NMR and MD simulation**  
Jeremia Oktavian Chrisnanto, Kohei Kano, Mitsuki Shibagaki, Tefera Dessalegn Abeje, Hirai Fumi, Yasuhiro Kumaki, Hiroyuki Kumeta, Tomoyasu Aizawa  
Hokkaido University
- \*26P-019** **Discovery and structural characterization of novel pore-forming toxins**  
Jana Susanne Anton, Fernando Meireles, Juan F. Bada, Maria J. Marcaida, Matteo Dal Peraro  
Laboratory for Biomolecular Modeling, École polytechnique fédérale de Lausanne, Switzerland
- \*26P-020** **Functional annotation of Cysteine Post-Translational Modifications based on protein sequences and structures and development of a consolidated Cysteine database (CysDBase)**  
Devarakonda Himaja, Dr. Debashree Bandyopadhyay  
Birla Institute of Technology and Science, Hyderabad Campus , INDIA

# Poster Sessions

---

---

- \*26P-021**     **Crystal structure and proton transporting mechanism of viral heliorhodopsin, V2HeR3**  
Ritsu Mizutori<sup>1</sup>, Nipawan Nuemket<sup>2,3</sup>, Shoko Hososhima<sup>1</sup>, Sayaka Ohashi<sup>1</sup>, Satoshi Tsunoda<sup>1,4</sup>, Yuji Furutani<sup>1,4</sup>, Oded Baja<sup>5</sup>, Eriko Nango<sup>3,6</sup>, Kota Katayama<sup>1,4</sup>, Hideki Kandori<sup>1,4</sup>  
<sup>1</sup>Nagoya Institute of Technology, <sup>2</sup>Japan Synchrotron Radiation Research Institute, <sup>3</sup>RIKEN Spring-8, <sup>4</sup>OptoBioTechnology Research Center, <sup>5</sup>Technion-Israel Institute of Technology, <sup>6</sup>Institute of Multidisciplinary Research for Advanced Materials, Tohoku University
- \*26P-022**     **Theoretical study on the photoactivation state of chloride pump NpHR using QM/MM Method**  
Tomo Ejiri, Ryo Oyama, Shigehiko Hayashi  
Department of Chemistry, Graduate School of Science, Kyoto University, Kyoto, Japan
- \*26P-023**     **Investigating allosteric communication with ultrahigh-resolution X-ray crystallography**  
Caitlin Emma Hatton, Pedram Mehrabi  
Institute for Nanostructure and Solid-State Physics, Universität Hamburg, Hamburg, Germany
- \*26P-024**     **Development of supramolecular micelles promoting oxidative protein folding under a crowded environment**  
Mai Kitamura<sup>1</sup>, Takahiro Muraoka<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Tokyo University of Agriculture and Technology, Tokyo, Japan, <sup>2</sup>Kanagawa Institute of Industrial Science and Technology, Kanagawa, Japan
- \*26P-025**     **Insights into the Cytochrome c Oxidase proton pumping mechanism from constant-pH MD simulations**  
Ines Domingos Silva Pires<sup>1</sup>, António M. Baptista<sup>2</sup>, Miguel Machuqueiro<sup>1</sup>  
<sup>1</sup>BioISI - Biosystems and Integrative Sciences Institute, Faculdade de Ciências, Universidade de Lisboa, Campo Grande, Ed. C8, Lisboa, Portugal, <sup>2</sup>ITQB NOVA, Instituto de Tecnologia Química e Biológica António Xavier, Universidade Nova de Lisboa, Av. da República, EAN 2780-157 Oeiras, Portugal

**Wednesday, June 26**

- \*26P-026** **Mass photometry as a novel single molecule approach to study immunoglobulin binding protein (BiP) oligomerization and function**  
Karina New<sup>1</sup>, Miguel Lagos<sup>1</sup>, Roi Asor<sup>2</sup>, Zahra Alavi<sup>3</sup>, Philipp Kukura<sup>2</sup>, Christian Wilson<sup>1</sup>  
<sup>1</sup>Faculty of Chemical and Pharmaceutical Sciences, University of Chile, Santiago, Chile, <sup>2</sup>Department of Chemistry, University of Oxford, Oxford, UK, <sup>3</sup>Seaver College of Science and Engineering, Loyola Marymount University, Los Angeles, USA
- \*26P-027** **Catalytic mechanism of the cytosolic  $\theta$  type carbonic anhydrase from marine diatom *Phaeodactylum tricornutum***  
Hiroto Negoro<sup>1,2</sup>, Hideaki Tanaka<sup>1,2</sup>, Ginga Shimakawa<sup>3</sup>, Hiroyasu Koteishi<sup>1,2</sup>, Akihiro Kawamoto<sup>1,2</sup>, Yusuke Matsuda<sup>3</sup>, Genji Kurisu<sup>1,2</sup>  
<sup>1</sup>Institute for Protein Research, Osaka University, <sup>2</sup>Department of Biotechnology, Graduate School of Engineering, Osaka University, <sup>3</sup>Department of Bioscience, School of Biological & Environmental Sciences, Kansai Gakuin University
- \*26P-028** **Structure of nitric oxide reductase dimer revealed by single particle cryo-electron microscopy**  
Ryohei Kawakami<sup>1,2</sup>, Chai Gopalasingam<sup>2</sup>, Hideki Shigematsu<sup>3</sup>, Takehiko Tosha<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. Sci., Univ. Hyogo, Hyogo, Japan, <sup>2</sup>RIKEN SPring-8 Center, Hyogo, Japan, <sup>3</sup>JASRI Structural Biology, Hyogo, Japan
- 26P-029** **The glycation effect on structure and dynamics of human serum albumin**  
 Prin Tadawattana, Sirin Sittivanitchai, Prapasiri Pongprayoon  
 Department of Chemistry, Faculty of Science, Kasetsart University, Chatuchak, Bangkok, 10900, Thailand
- 26P-030** **The crystal structures of Sau3AI with and without bound DNA suggest a self-activation-based DNA cleavage mechanism**  
Feng Yu<sup>2</sup>, Yahui Liu<sup>1</sup>, Chunyan Xu<sup>2</sup>, Huan Zhou<sup>2</sup>, Weiwei Wang<sup>2</sup>, Bing Liu<sup>5</sup>, Yan Liu<sup>1,6</sup>, Xiaojian Hu<sup>3</sup>, Jianhua He<sup>4</sup>  
<sup>1</sup>Department of Pathogen Biology, School of Basic Medicine, Tongji Medical College, Huazhong University of Science and Technology, 13 Hangkong Road, Wuhan, Hubei 430030, China, <sup>2</sup>Shanghai Synchrotron Radiation Facility, Shanghai Advanced Research Institute, Chinese Academy of Sciences, Shanghai 201204, China, <sup>3</sup>School of Life Sciences, Fudan University, Shanghai 200433, China, <sup>4</sup>The Institute for Advanced Studies, Wuhan University, Wuhan 430072, China, <sup>5</sup>Department of Laboratory Medicine, the First Affiliated Hospital of Xi'an Jiaotong University, Xi'an 710061, China, <sup>6</sup>Department of Pediatrics, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei 430030, China

# Poster Sessions

---

---

**26P-031**      **Mechanism of Formate Oxidation by NAD-dependent Formate Dehydrogenase: Computational Studies on Near-Attack Conformations**

Jiri Kozelka<sup>1,2</sup>, Yevgen Yurenko<sup>3</sup>, Jan Novotný<sup>3,4</sup>, Radek Marek<sup>3,4</sup>

<sup>1</sup>Department of Condensed Matter Physics, Faculty of Science, Masaryk University, Brno, Czech Republic, <sup>2</sup>Université Paris Cité, DSIMB UMR\_S U1134, Paris, France, <sup>3</sup>National Center for Biomolecular Research, Masaryk University, Brno, Czech Republic, <sup>4</sup>Department of Chemistry, Faculty of Science, Masaryk University, Brno, Czech Republic

**26P-032**      **Imaging and inhibition analysis of human serum amyloid A aggregation using quantum dots**

Liangquan Shi, Tuya Gegen, Kuragano Masahiro, Tokuraku Kiyotaka  
Graduate School of Engineering, Muroran Institute of Technology

**26P-033**      **Real-time Imaging and Inhibition Analysis of Amylin Aggregations Using Quantum Dot nanoprobe**

Xiaoyu Yin, Ziwei Liu, Tuya Gegen, Hayate Sawatari, Keiya Shimamori, Masahiro Kuragano, Kiyotaka Tokuraku  
Graduate School of Engineering, Muroran Institute of Technology

**26P-034**      **Structural and functional analyses of YeeE/YeeD complex in thiosulfate uptake pathway**

Mai Ikei<sup>1</sup>, Ryoji Miyazaki<sup>1</sup>, Keigo Monden<sup>1</sup>, Yusuke Naito<sup>1</sup>, Azusa Takeuchi<sup>1</sup>, Yutaro S. Takahashi<sup>1</sup>, Yoshiki Tanaka<sup>1</sup>, Keina Murata<sup>2</sup>, Takaharu Mori<sup>2</sup>, Muneyoshi Ichikawa<sup>3</sup>, Tomoya Tsukazaki<sup>1</sup>

<sup>1</sup>Nara Institute of Science and Technology, <sup>2</sup>Tokyo University of Science, <sup>3</sup>Fudan University

**26P-035**      **TRANSPLANTATION OF ENZYMATIC FUNCTION BY EXCHANGE OF FUNCTION ELEMENTS**

Mikio Kataoka<sup>1</sup>, Yoichi Yamazaki<sup>1</sup>, Yasushi Imamoto<sup>2</sup>, Hironari Kamikubo<sup>1</sup>

<sup>1</sup>Nara Institute of Science and Technology, <sup>2</sup>Kyoto University

## Protein: Physical property

**\*26P-037**      **Thermal Boundary Conductance at the Protein–Water Interface**

Futa Yoshimura, Takahisa Yamato

Graduate School of Science, Nagoya University, Nagoya, Japan

## Wednesday, June 26

- \*26P-038**     **Structural Insights into Switching Mechanisms between Spontaneous Folding and Ligand-Induced Folding of Staphylococcal Nuclease**  
Yujiro Mori<sup>1,2</sup>, Issei Suzuki<sup>3</sup>, Shogo Fukazawa<sup>3</sup>, Kosuke Miki<sup>3</sup>, Heinrich Roder<sup>2</sup>, Kosuke Maki<sup>1</sup>  
<sup>1</sup>Grad. Schl. Sci., Nagoya Univ., Aichi, Japan, <sup>2</sup>Fox Chase Cancer Ctr., Pennsylvania, United States, <sup>3</sup>Schl. Sci., Nagoya Univ., Aichi, Japan
- 26P-039**      **$\alpha$ B-crystallin prevents aging of  $\alpha$ -synuclein droplets**  
Kenji Fujitsuka<sup>1</sup>, Keisuke Yuzu<sup>1</sup>, Yuki Michiue<sup>1</sup>, John A. Carver<sup>2</sup>, Eri Chatani<sup>1</sup>  
<sup>1</sup>Graduate School of Science, Kobe University, Kobe, Japan, <sup>2</sup>Research School of Chemistry, Australian National University, Canberra, Australia
- \*26P-040**     **The function of multiple aggregates formed by the tumor suppressor protein p53**  
Emi Hibino<sup>1</sup>, Reiji Hijikata<sup>1</sup>, Takeshi Tenno<sup>1,2</sup>, Hidekazu Hiroaki<sup>1,2</sup>  
<sup>1</sup>Grad. Sci. Pharm. Sci, Nagoya Univ., <sup>2</sup>BeCellBar
- \*26P-041**     **Spatiotemporal formation of a single liquid-like condensate of  $\alpha$ -synuclein and subsequent aging by optical trapping**  
Keisuke Yuzu<sup>1,2</sup>, Ching-Yang Lin<sup>2</sup>, Po-Wei Yi<sup>2</sup>, Chih-Hao Huang<sup>2</sup>, Hiroshi Masuhara<sup>2</sup>, Eri Chatani<sup>1</sup>  
<sup>1</sup>Graduate School of Science, Kobe University, Kobe, Japan, <sup>2</sup>Department of Applied Chemistry, National Yang Ming Chiao Tung University, Hsinchu, Taiwan
- 26P-042**     **The oligomeric state is essential for fibroin nanofiber formation.**  
Haruya Kajimoto<sup>1</sup>, Kento Yonezawa<sup>2</sup>, Takehiro Sato<sup>3</sup>, Kok Sim Chan<sup>1</sup>, Kiichi Hyashi<sup>1</sup>, Takuya Sawai<sup>1</sup>, Yusuke Okamoto<sup>1</sup>, Rakuri Aiba<sup>1</sup>, Yoichi Yamazaki<sup>1</sup>, Sachiko Toma-Fukai<sup>1</sup>, Hironari Kamikubo<sup>1,2</sup>  
<sup>1</sup>Division of Materials Science, Graduate School of Science and Technology, Nara Institute of Science and Technology, 8916-5, Takayama, Ikoma, Nara, Japan, <sup>2</sup>Center for Digital Green-innovation, Nara Institute of Science and Technology, 8916-5, Takayama, Ikoma, Nara, Japan, <sup>3</sup>Spiber inc., 234-1, Kakuganzi-Mizukami, Tsuruoka, Yamagata, Japan

# Poster Sessions

## Protein: Function

- \*26P-043** pH-gating mechanism of the bacterial inner membrane urea channel HpUrel of *Helicobacter pylori*  
Sahar Shojaei, Anna Stoib, Tobias Putz, Nađa Stević, Christine Siligan, Andreas Horner  
Institute of Biophysics, Johannes Kepler University Linz, Gruberstr. 40, 4020 Linz, Austria
- \*26P-044** Yeast complementation assays as a screening tool for urea, water, and ammonia permeability of membrane channels  
Anna Stoib, Sahar Shojaei, Felix Wolkenstein, Sandra Posch, Christine Siligan, Andreas Horner  
Institute of Biophysics, Johannes Kepler University Linz, Gruberstr. 40, 4020 Linz, Austria
- \*26P-045** Enhanced cell-membrane fluidity mediated by antifreeze proteins mitigates hypothermic injury to cells  
Yue Yang<sup>1</sup>, Tatsuya Arai<sup>1,2</sup>, Sakae Tsuda<sup>1</sup>, Kazuhiro Mio<sup>2</sup>, Yuji C. Sasaki<sup>1,2</sup>  
<sup>1</sup>Graduate School of Frontier Sciences, the University of Tokyo, Chiba, Japan, <sup>2</sup>AIST-Utoko OPERANDO-OIL, Chiba, Japan
- 26P-046** Towards longer luminescence lifetime of the minimal luciferase picALuc  
Yuki Ohmuro-Matsuyama<sup>1</sup>, Genta Kamiya<sup>2</sup>, Kento Motoyama<sup>1</sup>, Mitsuru Hattori<sup>3</sup>, Ryogo Takai<sup>1</sup>, Nobuo Kitada<sup>2</sup>, Takeharu Nagai<sup>3</sup>, Shojiro Maki<sup>2</sup>, Hayato Matsui<sup>1</sup>, Tadaomi Furuta<sup>4</sup>  
<sup>1</sup>Technology Research Laboratory, Shimadzu Corporation, <sup>2</sup>Graduate School of Informatics and Engineering, The University of Electro-Communications, <sup>3</sup>The Institute of Scientific and Industrial Research, Osaka University, <sup>4</sup>School of Life Science and Technology, Tokyo Institute of Technology
- 26P-047** High-speed atomic force microscopy reveals functional dynamics of FnCas9  
Hideaki Tsukada  
Mikihiro Shibata

**Wednesday, June 26****Protein: Measurement & Analysis**

- \*26P-048**    **Development of Liquid Sample Observation Methods for Pulse-Electron Microscope**  
Ryoya Katayama, Takeru Yamasaki, Tomoharu Matsumoto, Akihiro Narita  
 Grad. Sch. of Sci., Nagoya Univ.
- \*26P-049**    **Light-induced structural changes of heliorhodopsin 48C12 studied by using surface-enhanced infrared absorption spectroscopy**  
Tatsuya Sakamoto<sup>1</sup>, Soichiro Kato<sup>1</sup>, Jingyi Tang<sup>1</sup>, Insyeerah Jauhari<sup>2</sup>, Yuji Furutani<sup>1,3</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, Aichi, Japan,  
<sup>2</sup>Faculty of Engineering, Nagoya Institute of Technology, Aichi, Japan,  
<sup>3</sup>OptoBioTechnology Research Center, Nagoya Institute of Technology, Aichi, Japan
- \*26P-050**    **Nanopore-based peptidome analysis based on the protein-protein interactions.**  
Misa Yamaji<sup>1</sup>, Ayaka Nakada<sup>1</sup>, Kota Naito<sup>2</sup>, Yoshikazu Tanaka<sup>2</sup>, Ryuji Kawano<sup>1</sup>  
<sup>1</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Tokyo, Japan., <sup>2</sup>Department of Biomolecular Sciences, Tohoku University, Miyagi, Japan.
- 26P-051**    **Protein Acetylation Tracked using UV-Visible Absorption, Luminescence Spectroscopy and TD-DFT calculations**  
Rajaram Swaminathan<sup>1</sup>, Himanshi Devi<sup>1</sup>, Simangka Borsaikia<sup>1</sup>, Apoorva Badaya<sup>2</sup>, Ravindra Venkatramani<sup>2</sup>  
<sup>1</sup>Department of Biosciences and Bioengineering, Indian Institute of Technology Guwahati, Assam, India, <sup>2</sup>Department of Chemical Sciences, Tata Institute of Fundamental Research, Mumbai, India
- 26P-052**    **Development of cysteine-specific modification technique for the quantitative analysis**  
Arisa Suto<sup>1</sup>, Yoshio Kodera<sup>1,2</sup>, Takashi Matsui<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. Sci., Kitasato Univ., <sup>2</sup>Center for Disease Proteomics, Sch. Sci., Kitasato Univ.

## Poster Sessions

---

---

**26P-053**      **Analysis of membrane translocation of *Clostridioides difficile* binary toxin using electrophysiological techniques**

Yuki Mitani<sup>1</sup>, Sotaro Takiguchi<sup>2</sup>, Ryuji Kawano<sup>2</sup>, Hideaki Tsuge<sup>1</sup>

<sup>1</sup>Graduate School of Life Science, Kyoto Sangyo University, Kyoto, Japan.,

<sup>2</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Tokyo, Japan.

**26P-054**      **Simple and Efficient Detection Scheme of Two-Color Fluorescence Correlation Spectroscopy for Protein Dynamics Investigation from Nanoseconds to Milliseconds**

Yutaka Sano<sup>1</sup>, Yuji Itoh<sup>1</sup>, Atsuhito Fukasawa<sup>2</sup>, Hiroyuki Oikawa<sup>1</sup>, Satoshi Takahashi<sup>1</sup>

<sup>1</sup>Tohoku University, <sup>2</sup>Hamamatsu Photonics K. K.

### Protein: Design & Engineering

**\*26P-055**      **Computational Design of engineered NT-193 antibody with broad activity against SARS-CoV-2 variant.**

Xu Pan, Hisham M. Dokainish, Katsumi Maenaka

Faculty of Pharmaceutical Sciences, Hokkaido University

**\*26P-056**      **In silico/in vitro evolution of peptide nanopore with  $\beta$ -barrel structure**

Mana Sato<sup>1</sup>, Shoko Fujita<sup>1</sup>, Tomoaki Matsuura<sup>2</sup>, Ryuji Kawano<sup>1</sup>

<sup>1</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Tokyo, Japan, <sup>2</sup>Earth-Life Science Institute, Tokyo Institute of Technology, Tokyo, Japan

**\*26P-057**      **The molecular basis through which Fv-supercharging affects the physicochemical properties of antibodies**

Keisuke Kasahara<sup>1</sup>, Daisuke Kuroda<sup>2</sup>, Jose Caaveiro<sup>3</sup>, Satoru Nagatoishi<sup>4</sup>, Kouhei Tsumoto<sup>1,4,5</sup>

<sup>1</sup>Department of Bioengineering, School of Engineering, The University of Tokyo,

<sup>2</sup>Research Center for Drug and Vaccine Development, National Institute of Infectious Diseases, <sup>3</sup>Graduate School of Pharmaceutical Science, Kyushu University, <sup>4</sup>Medical Device Development and Regulation Research Center, School of Engineering, The University of Tokyo, <sup>5</sup>Department of Chemistry and Biotechnology, School of Engineering, The University of Tokyo

**\*26P-058**      **Dynamics and Evolution of Uniform Substrate Binder**

Yusran Abdillah Muthahari, Paola Laurino

Okinawa Institute of Science and Technology (OIST) Graduate School



**Wednesday, June 26**

- \*26P-059** **Tandem artificial nucleocapsid to package longer RNA genome and expand protein architectures**  
Hualin Li, Naohiro Terasaka  
 Earth-Life Science Institute, Tokyo Institute of Technology, Tokyo, Japan
- \*26P-060** **Exploring the design rules for artificial phase-separating peptides based on natural phase-separating protein sequences**  
Joe Mori<sup>1,2</sup>, Atsumi Hando<sup>1</sup>, Satoshi Takahashi<sup>1,2</sup>, Keisuke Ikeda<sup>3</sup>, Kiyoto Kamagata<sup>1,2</sup>  
<sup>1</sup>Institute for Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan, <sup>2</sup>Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, Japan, <sup>3</sup>Department of Biointerface Chemistry, Faculty of Pharmaceutical Sciences, University of Toyama, Toyama, Japan
- 26P-061** **Development of various fluorescence lifetime sensors using mTurquoise2 platform**  
Chongxia Zhong<sup>1,2</sup>, Satoshi Arai<sup>1</sup>, Yasushi Okada<sup>2,3</sup>  
<sup>1</sup>WPI Nano Life Science Institute, Kanazawa University, Kanazawa, Japan, <sup>2</sup>Laboratory for Cell Polarity Regulation, RIKEN Center for Biosystems Dynamics Research, RIKEN, Osaka, Japan, <sup>3</sup>Department of Cell Biology, Department of Physics, the University of Tokyo, Tokyo, Japan
- 26P-062** **Darwinian ultrahigh-throughput evolution of biomolecules with in vitro compartmentalized gene amplification races**  
Taro Furubayashi<sup>1</sup>, Thibault Di Meo<sup>1</sup>, Yoshihiro Minagawa<sup>1</sup>, Hiroyuki Noji<sup>1</sup>, Yannick Rondelez<sup>2</sup>  
<sup>1</sup>The University of Tokyo, Tokyo, Japan, <sup>2</sup>ESPCI, Paris, France
- 26P-063** **Magnetic bead-based protein display screening system for quantitative selection and evolution of functional proteins**  
Shingo Ueno<sup>1</sup>, Fumi Toshioka<sup>1</sup>, Shoichi Tsuchiya<sup>1</sup>, Takanori Ichiki<sup>1,2</sup>  
<sup>1</sup>Innovation Center of NanoMedicine (iCONM), Kawasaki Institute of Industrial Promotion, <sup>2</sup>Graduate School of Engineering, University of Tokyo

**Protein: Intrinsic disorder**

- \*26P-064** **Improvement of detection ability for amyloid fibril seeds by interaction between ultrasonic cavitation and surfactants**  
Tomoki Ota, Kichitaro Nakajima, Keiichi Yamaguchi, Yuji Goto, Hirotsugu Ogi  
 Osaka University, Graduate School of Engineering

# Poster Sessions

---

---

- \*26P-065**     **The role of phase transitions of biopolymers in the formation and functioning of A-bodies**  
Anastasiia Gavrilova<sup>1</sup>, Yakov Mokin<sup>1</sup>, Anna Fefilova<sup>2</sup>, Aleksander Fonin<sup>1</sup>  
<sup>1</sup>Laboratory of structural dynamics, stability and folding of proteins, Institute of Cytology, Russian Academy of Sciences, St. Petersburg 194064, Russia, <sup>2</sup>Center of Genomic Regulation (GRC), Barcelona Institute of Science and Technology, Barcelona, 08003, Spain
- \*26P-066**     **High-Speed Atomic Force Microscopy Reveals Structural Dynamics of Microtubule-Associated Protein Tau Aggregation.**  
Tatsuya Kimura<sup>1</sup>, Kenjiro Ono<sup>2</sup>, Ken-ichi Umeda<sup>1</sup>, Daiki Muramatsu<sup>2</sup>, Hiroki Konno<sup>1</sup>, Noriyuki Kodera<sup>1</sup>, Toshio Ando<sup>1</sup>, Takahiro Nakayama<sup>1</sup>  
<sup>1</sup>WPI-Nano Life Science Institute, Kanazawa University, Kanazawa, Japan, <sup>2</sup>Graduate School of Medical Sciences, Kanazawa University, Kanazawa, Japan
- 26P-067**     **From the single-chain behavior to phase behavior of intrinsically disordered proteins**  
Xiangze Zeng  
Hong Kong Baptist University

## Heme proteins

- \*26P-068**     **Organ-specific probing of mitochondrial and lipid properties in *Caenorhabditis elegans* with Raman spectroscopy and imaging**  
Evelina Nikelshparg<sup>1</sup>, Mariela Pavan<sup>2</sup>, Anat Ben-Zvi<sup>1</sup>  
<sup>1</sup>Ben-Gurion University Of The Negev, Faculty Of Natural Sciences, Life Sciences Department, <sup>2</sup>Ben-Gurion University Of The Negev, Ilse Katz Institute for Nanoscale Science & Technology
- 26P-069**     **Purification and characterization of cholate-free cytochrome c oxidase from bovine heart**  
Kyoko Shinzawa-Itoh<sup>1</sup>, Kenta Tsutumi<sup>3</sup>, Tomohiro Ide<sup>2</sup>, Seishiro Mori<sup>2</sup>, Eiki Yamashita<sup>3</sup>, Kazumasa Muramoto<sup>1</sup>  
<sup>1</sup>Graduate School of Science, University of Hyogo, <sup>2</sup>School of Science, University of Hyogo, <sup>3</sup>Institute of Protein Research, Osaka University

**Wednesday, June 26****Membrane proteins**

- \*26P-070** **Time-resolved FTIR study of light-driven ion pump rhodopsin mutants converted from sodium to chloride pump.**  
Masahiro Yamamoto<sup>1</sup>, Hideki Kandori<sup>1,2</sup>, Yuji Furutani<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, Aichi, Japan,  
<sup>2</sup>OptoBioTechnology Research Center, Nagoya Institute of Technology, Aichi, Japan
- \*26P-071** **Detection of TEV protease by pore blockage in Outer Membrane Protein-G Nanopore mutation**  
Haruka Suzuki, Toshiyuki Tosaka, Koki Kamiya  
 Graduate School of Science and Engineering, Gunma University, Gunma, Japan
- \*26P-072** **Construction and evaluation of the mutant  $\beta$ -barrel outer membrane protein nanopore**  
Toshiyuki Tosaka, Koki Kamiya  
 Graduate School of Science and Technology, Gunma University, Gunma, Japan
- \*26P-073** **Detection of Polypeptide Related to Membrane Fusion through Nanopore MscL and Interaction based on Proteins Function**  
 Weibo Liang  
 State Key Laboratory of Biotherapy, Sichuan University, Chengdu, China
- \*26P-074** **Time-resolved infrared dual-comb spectroscopy using quantum cascade lasers reveals differences in conformational changes of two heliorhodopsins found from a bacterium and an archaeon**  
Toshiki Nakamura<sup>1</sup>, Soichiro Kato<sup>1</sup>, Ryo Yamamoto<sup>1</sup>, Manish Singh<sup>1</sup>,  
 Hideki Kandori<sup>1,2</sup>, Yuji Furutani<sup>1,2</sup>  
<sup>1</sup>Department of Life Science and Applied Chemistry, Nagoya Institute of Technology, Nagoya, Japan,, <sup>2</sup>OptoBioTechnology Research Center, Nagoya Institute of Technology, Nagoya, Japan
- \*26P-075** **Exploration of physical properties in streptomyces heliorhodopsin and the physiological function in the native cells**  
Koyo Yamada<sup>1</sup>, Rei Abe-Yoshizumi<sup>1</sup>, Toshiki Nakamura<sup>1</sup>, Yuji Furutani<sup>1,2</sup>,  
 Tatsuro Nishikino<sup>1</sup>, Hideki Kandori<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. of Eng., Nagoya Inst. of Tech., Aichi, Japan, <sup>2</sup>OptoBio Tech. Res. Cent., Nagoya Inst. of Tech., Aichi, Japan

## Poster Sessions

---

- 26P-076** **Rottlerin as an aquaporin-3 inhibitor for cancer therapy**  
Inês Paccetti Alves<sup>1</sup>, Marta Baptista<sup>2</sup>, Catarina Pimpão<sup>1</sup>, Inês V. da Silva<sup>1</sup>, Bruno L. Victor<sup>2</sup>, Graça Soveral<sup>1</sup>  
<sup>1</sup>Research Institute for Medicines (iMed.Ulisboa), Faculty of Pharmacy, Universidade de Lisboa, Lisbon, <sup>2</sup>BiolSI, Faculty of Sciences, Universidade de Lisboa, Lisbon, Portugal
- 26P-077** **An attempt at high-resolution structural analysis of membrane proteins reconstituted into liposomes**  
Atsuki Nakano, Takaya Kawachi, Ren Kobayashi, Yuto Muto, Taichi Tsuyama, Ken Yokoyama  
Kyotosangyo University
- 26P-078** **Reconstitution and nanoscale visualization of cadherin clusters on supported lipid bilayer in solution**  
Shigetaka Nishiguchi<sup>1,5</sup>, Tadaomi Furuta<sup>2</sup>, Yui Kanaoka<sup>3</sup>, Takayuki Uchihashi<sup>1,3,4</sup>  
<sup>1</sup>Exploratory Research Center on Life and Living Systems, National Institutes of Natural Sciences, Okazaki, Japan, <sup>2</sup>School of Life Science and Technology, Tokyo Institute of Technology, Yokohama, Japan, <sup>3</sup>Department of Physics, Nagoya University, Nagoya, Japan, <sup>4</sup>Institute for Glyco-core Research (iGCORE), Nagoya University, Nagoya, Japan, <sup>5</sup>Current affiliation: Department of Biotechnology, Osaka University, Suita, Japan
- 26P-079** **Protonophoric function of the 2-oxoglutarate/malate carrier.**  
Elena E Pohl, Kristina Žuna, Tatyana Tyschuk, Jürgen Kreiter  
Department of Biomedical Sciences, University of Veterinary Medicine, 1210 Vienna, Austria

### DNA & DNA binding proteins

- \*26P-080** **Dynamic interactions between DNA and a transcription factor, Photozipper, visualized by high-speed atomic force microscopy**  
Akihiro Tsuji<sup>1</sup>, Hayato Yamashita<sup>1</sup>, Osamu Hisatomi<sup>2</sup>, Masayuki Abe<sup>1</sup>  
<sup>1</sup>Graduate School of Engineering Science, Osaka University, Osaka, Japan, <sup>2</sup>Graduate School of Science, Osaka University, Osaka, Japan
- \*26P-081** **Mechanism of DNAs attraction mediated by low and high valence salts**  
Hongwei Zuo, Fujia Tian, Liang Dai  
city university of Hong Kong

## Wednesday, June 26

### 26P-082 Encapsulation of cell nucleolus by single-stranded DNA

[Koichiro Maki](#)<sup>1,2,3,4</sup>, [Jumpei Fukute](#)<sup>1,3</sup>, [Taiji Adachi](#)<sup>1,2,3,4</sup>

<sup>1</sup>Laboratory of Biomechanics, Institute for Life and Medical Sciences, Kyoto University, Japan, <sup>2</sup>Department of Micro Engineering, Graduate School of Engineering, Kyoto University, Japan, <sup>3</sup>Department of Mammalian Regulatory Network, Graduate School of Biostudies, Kyoto University, Japan, <sup>4</sup>Department of Medicine and Medical Science, Graduate School of Medicine, Kyoto University, Japan

### RNA & RNA binding proteins

#### \*26P-083 Molecular simulations to investigate the protein-RNA assembly mechanism of Tetrahymena telomerase

[Max Cutler](#), Naoto Hori, Charles Laughton  
Nottingham University

#### 26P-084 Structural Ensembles of the 5'-UTR of Hepatitis C Virus RNA With and Without MicroRNA Using SIS-RNA Model

[Huong T Vu](#), Naoto Hori  
School of Pharmacy, University of Nottingham, Nottingham, NG7 2RD, United Kingdom

### DNA/RNA nanotechnology

#### \*26P-085 Automation of DNA gel generation experiments using machine learning and pipetting robots

[Yuko Yoshida](#)<sup>1</sup>, [Masahiro Takinoue](#)<sup>1,2</sup>

<sup>1</sup>Department of Computer Science, Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>Living Systems Materialogy (LiSM), Tokyo Institute of Technology, Tokyo, Japan

#### \*26P-086 Network formation of enzymes via DNA motif in two types of cascade reactions

[Aoi Mameuda](#), Koki Kamiya  
Graduate School of Science and Technology, Gunma University, Gunma, Japan

#### \*26P-087 A Hydrogel Biosensor Combining Aptamer Recognition and DNA-Driven Hydrogels

[Satofumi Kato](#)<sup>1</sup>, [Masahiro Takinoue](#)<sup>2</sup>, [Hiroaki Onoe](#)<sup>1</sup>

<sup>1</sup>Keio University, <sup>2</sup>Tokyo Institute of Technology

## Poster Sessions

---

---

**\*26P-088**    **Towards Rotary DNA Motor with Conformational Change**  
Akihiro Fukuda<sup>1</sup>, Yusuke Sato<sup>2</sup>, Takeshi Yokoyama<sup>1,3</sup>, Yoshikazu Tanaka<sup>1</sup>,  
Shoichi Toyabe<sup>1</sup>  
<sup>1</sup>Tohoku University, <sup>2</sup>Kyushu Institute of Technology, <sup>3</sup>JST PRESTO

**\*26P-089**    **Liquid-liquid phase separation of computational DNA droplets on the gold surface**  
Koki Yoshida, Masahiro Takinoue  
Tokyo Institute of Technology

### Nucleic acid: Others

**\*26P-090**    **Molecular Dynamics Simulations to Investigate Interactions Between Polymers and RNA in Polymer Nanoparticles**  
James Aaron Robins, Naoto Hori, Cameron Alexander, Keith Spriggs  
School of Pharmacy, University of Nottingham

**\*26P-091**    **Oligonucleotide Assembly enhanced by intrinsically disordered protein droplet**  
Tajji Ueno, Yoshihiro Minagawa, Hiroyuki Noji  
Department of Applied Chemistry, School of Engineering, The university of Tokyo.

### Chromatin & Chromosomes

**\*26P-092**    **Mechanic Properties of Nucleosomes are Key Modulators of the Unwrapping Energy Landscape**  
Maria Julia Maristany<sup>1</sup>, Ignacio Perez Lopez<sup>2</sup>, Stephen Farr<sup>3</sup>, Jan Huertas<sup>4,5</sup>,  
Rosana Collepardo-Guevara<sup>4,5</sup>  
<sup>1</sup>Department of Physics, University of Cambridge, UK, <sup>2</sup>University of Seville, Spain,  
<sup>3</sup>Universitat Pompeu Fabra, Spain, <sup>4</sup>Department of Chemistry, University of Cambridge, UK, <sup>5</sup>Department of Genetics, University of Cambridge, UK

**\*26P-093**    **Protein search processes mediated by chromatin topology**  
Shuvadip Dutta<sup>1</sup>, Adarshkrishnan R.<sup>1</sup>, Ranjith Padinhateeri<sup>2</sup>,  
Mithun K. Mitra<sup>1</sup>  
<sup>1</sup>Department of Physics, Indian Institute of Technology Bombay, Mumbai 400076, India, <sup>2</sup>Department of Biosciences and Bioengineering, Indian Institute of Technology Bombay, Mumbai 400076, India

## Wednesday, June 26

**26P-094**      **Effect of the molecular crowding environment on the structure of poly-nucleosomes**

[Tomoko Sunami](#)<sup>1</sup>, Amarjeet Kumar<sup>1</sup>, Hidetoshi Kono<sup>1,2</sup>

<sup>1</sup>iQLS, QST, <sup>2</sup>Graduate School of Sci. and Eng., Chiba Univ.

**26P-095**      **From Sequence to Structure: Refining Chromatin Models with PTM and Contact Frequency Data**

[Justin Chan](#)<sup>1</sup>, Giovanni Brandani<sup>2</sup>, Shoji Takada<sup>2</sup>, Kono Hidetoshi<sup>1</sup>

<sup>1</sup>Molecular Modeling and Simulation Team, iQLS, QST, Japan, <sup>2</sup>Department of Biophysics, Graduate School of Science, Kyoto University, Japan

### Water & Hydration & Electrolyte

**\*26P-096**      **Effect of hydration state polymers on Liquid-Liquid Phase Separation.**

[Kengo Cho](#), Mafumi Hishida

Department of Chemistry, Faculty of Science, Tokyo University of Science, Tokyo, Japan

**26P-097**      **Correlation analysis of co-solvation free energies in insulin dissociation**

[Simon Hikiri](#)<sup>1</sup>, Nobuyuki Matubayasi<sup>2</sup>

<sup>1</sup>College of Life Sciences, Ritsumeikan University, Kusatsu, Japan, <sup>2</sup>Graduate School of Engineering Science, Osaka University, Toyonaka, Japan

### Molecular genetics & Gene expression

**26P-098**      **PML protein localization and bioinformatic interactome analysis in ageing related diseases.**

[Eugene Smirnov](#), Sergey Silonov, Aleksandra Nozdracheva, Konstantin Turoverov, Alexander Fonin

Laboratory of Structural Dynamics, Stability and Folding of Proteins, Russian Academy of Sciences, St. Petersburg 194064, Russia

# Poster Sessions

## Morphogenesis and Development

**\*26P-099** Nuclear softening triggers a transcriptional burst during early embryogenesis

Masahito Tanaka<sup>1</sup>, Rin Sakanoue<sup>2</sup>, Atsushi Takasu<sup>2</sup>, Yasuki Miyagawa<sup>2</sup>, Naoko Watanabe<sup>1</sup>, Kei Miyamoto<sup>2</sup>, Yuta Shimamoto<sup>1,3</sup>

<sup>1</sup>Laboratory of Physics and Cell Biology, National Institute of Genetics, Shizuoka, Japan., <sup>2</sup>Graduate School of Biology-Oriented Science and Technology, Kindai University, Wakayama, Japan., <sup>3</sup>Department of Genetics, Sokendai University, Shizuoka, Japan.

## Muscle

**\*26P-100** Cardiac cycle-dependent alterations in redox states revealed by cryo-Raman spectral analysis

WenJin Ho<sup>1</sup>, Yoshinori Harada<sup>1</sup>, Kentaro Mochizuki<sup>1</sup>, Yasuaki Kumamoto<sup>2,3</sup>, Masahito Yamanaka<sup>2,3</sup>, Katsumasa Fujita<sup>2,3,4</sup>, Hideo Tanaka<sup>1,5</sup>

<sup>1</sup>Department of Pathology and Cell Regulation, Kyoto Prefectural University of Medicine, <sup>2</sup>Department of Applied Physics, Osaka University, <sup>3</sup>Institute for Open and Transdisciplinary Research Initiatives, Osaka University, <sup>4</sup>AIST-Osaka University Advanced Photonics and Biosensing Open Innovation Laboratory, National Institute of Advanced Industrial Science and Technology (AIST), <sup>5</sup>Faculty of Health and Medical Sciences, Kyoto University of Advanced Science

**26P-101** Effects of Near-Infrared Laser Irradiation on Circular Cardiomyocyte Network

Momo Akada, Kentaro Kito, Masahito Hayashi, Tomoyuki Kaneko  
LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ., Tokyo, Japan

## Molecular motor

**\*26P-102** Directionality on kinesin-1 motility can be determined depending on the anchor points

Rieko Sumiyoshi<sup>1,2</sup>, Masahiko Yamagishi<sup>1,3</sup>, Junichiro Yajima<sup>1,3,4</sup>

<sup>1</sup>Department of Life Sciences Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan, <sup>2</sup>JSPS Research Fellow, <sup>3</sup>Komaba Institute for Science, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Research Center for Complex Systems Biology, The University of Tokyo, Tokyo, Japan



## Wednesday, June 26

---

- \*26P-103** **Three-dimensional motility of myosin IC bound to lipid membrane**  
Yusei Sato<sup>1</sup>, Kohei Yoshimura<sup>2</sup>, Kyohei Matsuda<sup>1</sup>, Takeshi Haraguchi<sup>2</sup>, Akisato Marumo<sup>1</sup>, Masahiko Yamagishi<sup>1</sup>, Suguru Sato<sup>2</sup>, Kohji Ito<sup>2</sup>, Junichiro Yajima<sup>1</sup>  
<sup>1</sup>Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, <sup>2</sup>Department of Biology, Graduate School of Science, Chiba University
- \*26P-104** **Energetics of engineered FoF1-ATP synthase with high H<sup>+</sup>/ATP ratio**  
Kiyoto Yasuda<sup>2</sup>, Riku Marui<sup>1</sup>, Hiroshi Ueno<sup>2</sup>, Hiroyuki Noji<sup>2</sup>  
<sup>1</sup>The University of Tokyo, Graduate school of Engineering, Department of Bioengineering, Noji Lab., <sup>2</sup>The University of Tokyo, Graduate school of Engineering, Department of Applied Chemistry, Noji Lab.
- \*26P-105** **Biomolecular motors use two asymmetries to generate unidirectional movement**  
Shintaro Nakayama<sup>1,2</sup>, Akane Furuta<sup>1</sup>, Maki Yoshio<sup>1</sup>, Misako Amino<sup>1</sup>, Kazuhiro Oiwa<sup>1,2</sup>, Ken'ya Furuta<sup>1,3</sup>  
<sup>1</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, Hyogo, Japan, <sup>2</sup>Department of Life Science, Graduate School of Science, University of Hyogo, Hyogo, Japan, <sup>3</sup>Department of Biological Sciences, Graduate School of Science, Osaka University, Osaka, Japan
- 26P-107** **Nuclear Spin Catalysis in Living Cells and Biomolecular Motors**  
Vitaly K Koltover  
Federal Research Center of Problems of Chemical Physics and Medical Chemistry, Russian Academy of Sciences, Chernogolovka, Moscow Region, 142432, Russia
- 26P-108** **Mechanical force measurement of F1-ATPase using accurate revolution control by an optical-vortex tweezers.**  
Yu Hashimoto, Tomoko Otsu-Hyodo, Taro Ando, Yoshiyuk Ohtake, Sayaka Kazami, Yuji Kimura, Yu Takiguchi, Hiroyasu Itoh  
Central Research Laboratory, Hamamatsu Photonics K.K., Hamamatsu, Japan
- 26P-109** **Flagellar rotation-speed difference observed in the same bacterial cells**  
Tsubasa Ishihara, Shuichi Nakamura  
Grad. Sch. Eng., Tohoku Univ.

# Poster Sessions

## Single Molecule Biophysics

- \*26P-110** **Enhanced Interpretation of STED-FCS Diffusion Law Plot Dependencies**  
Barbora Svobodova<sup>1,2</sup>, Radek Sachl<sup>2</sup>  
<sup>1</sup>Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic, <sup>2</sup>J. Heyrovsky´ Institute of Physical Chemistry of the Czech Academy of Sciences, Prague, Czech Republic
- \*26P-111** **High sensitivity detection of HBV RNA based on 3D-DNA nanomachine and biological nanopore sensing technology**  
Shixin Yan, Jia Geng  
Department of Laboratory Medicine, State Key Laboratory of Biotherapy and Cancer Center, Med-X Center for Manufacturing, West China Hospital, Sichuan University, 610041, Chengdu, China
- \*26P-112** **NANOSPACER: Optical analysis of biomolecules and nanoparticles in solution using nanofluidic devices**  
Oliver Vanderpoorten  
UiT The Arctic University of Norway, Tromsø, Norway
- \*26P-113** **Single-molecule manipulation of genome integrity guardians**  
María Ortiz<sup>1</sup>, Roberto Galleto<sup>2</sup>, Borja Ibarra<sup>1</sup>  
<sup>1</sup>IMDEA Nanociencia, Faraday 9, 28049, Madrid, Spain, <sup>2</sup>Washington University School of Medicine, St. Louis, Missouri, USA
- \*26P-114** **Interdomain linkers regulate the mechanotransduction in proteins**  
Tanuja Joshi, Pritam Saha, Sabyasachi Rakshit  
Department of Chemical Sciences, Indian Institute of Science Education and Research Mohali, Punjab, India-140306,
- 26P-115** **Single-molecule sensing with aerolysin pore-forming toxins**  
Matteo Dal Peraro  
Institute of Bioengineering, School of Life Sciences, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
- 26P-116** **Live-cell Single-molecule Imaging and Mapping of Human SWI/SNF Chromatin Remodelers Reveal Bromodomain-mediated and Cancer-mutants-specific Landscape of Multi-modal DNA-binding Dynamics**  
Wilfried Engl, Hendrik Sielaff, Aliz Kunstar-Thomas, Siyi Chen, Woei Shyuan Ng, Ziqing Winston Zhao  
National University of Singapore

**Wednesday, June 26****Cell biology: Adhesion****26P-117 Dynamics and function of adhesion GPCR**

Rinshi Kasai<sup>1</sup>, Shigetaka Nishiguchi<sup>2</sup>, Takayuki Uchihashi<sup>3</sup>

<sup>1</sup>National Cancer Center Research Institute, <sup>2</sup>Osaka University, <sup>3</sup>Nagoya University

**Cell biology: Motility****\*26P-118 Sheet-like structure of bacterial actin MreBs driving helicity switching by cryo electron tomography**

Haruka Yuasa<sup>1</sup>, Yuya Sasajima<sup>1</sup>, Hana Kiyama<sup>1</sup>, Daichi Takahashi<sup>1,2</sup>, Takuma Toyonaga<sup>1,3</sup>, Tomoko Miyata<sup>4,5</sup>, Fumiaki Makino<sup>4,5,6</sup>, Keiichi Namba<sup>4,5</sup>, Makoto Miyata<sup>1,3</sup>

<sup>1</sup>Graduate School of Science, Osaka Metropolitan University, Osaka, Japan, <sup>2</sup>Research Institute for Interdisciplinary Science, Okayama University, Okayama, Japan, <sup>3</sup>The OMU Advanced Research Institute for Natural Science and Technology (OCARINA), Osaka Metropolitan University, Osaka, Japan, <sup>4</sup>Graduate School of Frontier Biosciences, Osaka University, Osaka, Japan, <sup>5</sup>JEOL YOKOGUSHI Research Alliance Laboratories, Osaka University, Osaka, Japan, <sup>6</sup>JEOL Ltd., Tokyo, Japan

**\*26P-119 Rotation of bacterial cell-bodies in different species capable and incapable of flagellar wrapping**

Naoki Ogura<sup>1</sup>, Aoba Yoshioka<sup>2</sup>, Daisuke Nakane<sup>2</sup>, Hirofumi Wada<sup>3</sup>

<sup>1</sup>Department of Biomedical Engineering, Tokyo University of Agriculture and Technology, <sup>2</sup>Department of Engineering Science, University of Electro-Communications, <sup>3</sup>Department of Physical Sciences, Ritsumeikan University

**\*26P-120 Viscoelasticity dependence of ciliary beating and the resulting flow**

Saki Tamura, Misako Otaki, Yoshihiro Murayama

Department of Biomedical Engineering, Tokyo University of Agriculture and Technology

**\*26P-121 Water flow navigates the long journey of surface-associated bacteria living in hot springs**

Naoki Uemura<sup>1</sup>, Naoya Chiba<sup>2</sup>, Masatada Tamakoshi<sup>2</sup>, Daisuke Nakane<sup>1</sup>

<sup>1</sup>Department of Engineering Science, The University of Electro-Communications, Tokyo, Japan, <sup>2</sup>School of Life Sciences, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan

# Poster Sessions

---

- \*26P-122**     **Analysis of Fluctuations in Measurement Data of Bacterial Flagellar Motors**  
Kenta Takemori, Yusuke V. Morimoto  
Graduate School of Computer Science and Systems Engineering, Kyushu Institute of Technology, Fukuoka, Japan
- \*26P-123**     **Quantitative model of vascular cell motility in angiogenesis**  
Hayate Segawa<sup>1</sup>, Shigetomo Fukuhara<sup>2</sup>, Kazushi Ikeda<sup>1</sup>, Yuichi Sakumura<sup>1</sup>  
<sup>1</sup>Nara Institute of Science and Technology, <sup>2</sup>Nippon Medical School
- \*26P-124**     **Suppressing Bacterial Surface Colonization and Motility with Biosurfactants**  
Li Xiaojie<sup>1</sup>, Andrew Utada<sup>2</sup>  
<sup>1</sup>Grad. Sch. Of Sci. and Tech. Univ. of Tsukuba, Tsukuba, Japan, <sup>2</sup>Faculty of Life and Env. Sci., Tsukuba, Japan
- \*26P-125**     **Cell Type-Dependent Coordinated Regulation of Rho GTPases in Cell Motility**  
Yufei Wu  
Nara Institute of Science and Technology
- 26P-126**     **A highly conserved Arg-391 residue of FlhA is involved in export switching of the flagellar type III secretion system in Salmonella**  
Tohru Minamino<sup>1</sup>, Miki Kinoshita<sup>1,2</sup>, Motoshi Sakai<sup>3</sup>, Takayuki Uchihashi<sup>4</sup>, Norihiro Takekawa<sup>3</sup>, Katsumi Imada<sup>3</sup>, Keiichi Namba<sup>1,2</sup>  
<sup>1</sup>Graduate School of Frontier Biosciences, Osaka University, <sup>2</sup>JEOL YOKOGUSHI Research Alliance Laboratories, Osaka University, <sup>3</sup>Graduate School of Science, Osaka University, <sup>4</sup>Department of Physics, Nagoya University
- 26P-128**     **Cell size variation affects bacterial swimming speed**  
Riu Osanai, Shuichi Nakamura  
Dept.appl.Phys.,Grad.Sch.Eng.,Tohoku Univ.
- 26P-129**     **Atomic model comparison of the L- and R-type straight bacterial flagellar filaments for understanding the supercoiling mechanism**  
Fumiaki Makino<sup>1,2,3</sup>, Kasim Waraichi<sup>4</sup>, Miki Kinoshita<sup>1,2</sup>, Tomoko Miyata<sup>1,2</sup>, Tohru Minamino<sup>1</sup>, Keiichi Namba<sup>1,2</sup>  
<sup>1</sup>Graduate School of Frontier Biosciences, Osaka University, Suita, Osaka, Japan, <sup>2</sup>JEOL YOKOGUSHI Research Alliance Laboratories, Osaka University, Suita, Osaka, Japan, <sup>3</sup>JEOL Ltd, Akishima, Tokyo, Japan, <sup>4</sup>MRC-University of Glasgow Centre for Virus Research, Glasgow, UK

**Wednesday, June 26****Cell biology: Cytoskeleton & Membrane skeleton**

- \*26P-130** **Deformability cytometry of Jurkat cells for cell immunotherapy**  
Lija Fajdiga, Nina Bernat, Lara Betocchi, Špela Zemljič Jokhadar,  
 Jure Derganc  
 Institute of Biophysics, Faculty of Medicine, University of Ljubljana, Slovenia
- \*26P-131** **Development and application of an optogenetic tool to control the actin polymerization**  
Kei Yamamoto<sup>1</sup>, Yosuke Yamazaki<sup>1</sup>, Kazuhiro Aoki<sup>2</sup>, Makito Miyazaki<sup>1,3,4</sup>  
<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Yokohama, Japan, <sup>2</sup>Kyoto University, Kyoto, Japan, <sup>3</sup>Institut Curie, Paris, France, <sup>4</sup>PRESTO, Japan Science and Technology Agency, Saitama, Japan
- 26P-132** **Polymerization of PEG-attached actin**  
Masaya Sagara, Hiroto Narita, Kuniyuki Hatori  
 Department of mechanical systems engineering, Faculty of engineering/Graduate school of science and engineering, Yamagata university
- 26P-133** **Measurement of intracellular forces using centrifuge polarizing microscope (CPM)**  
 Makoto Goda<sup>1,2</sup>, Michael Shribak<sup>1</sup>, Zenki Ikeda<sup>4,5</sup>, Naobumi Okada<sup>6</sup>, Tomomi Tani<sup>1,7</sup>, Gohta Goshima<sup>1,3</sup>, Rudolf Oldenbourg<sup>1</sup>, Akatsuki Kimura<sup>1,4,5</sup>  
<sup>1</sup>Marine Biological Laboratory, Woods Hole, Massachusetts, USA, <sup>2</sup>Hamamatsu University School of Medicine, Hamamatsu, Japan, <sup>3</sup>Nagoya University, Nagoya, Japan, <sup>4</sup>National Institute of Genetics, Mishima, Japan, <sup>5</sup>Sokendai, Mishima, Japan, <sup>6</sup>Independent Researcher, <sup>7</sup>National Institute of Advanced Industrial Science and Technology, Ikeda, Japan
- 26P-134** **Construction of a mechanical model for *C. elegans* gastrulation**  
Tokitaka Katayama<sup>1,2</sup>, Akatsuki Kimura<sup>1,2</sup>  
<sup>1</sup>National Institute of Genetic (NIG), <sup>2</sup>Genetics Course, SOKENDAI

**Cell biology: Signal transduction & Cell membrane**

- \*26P-135** **Cell size feedback mechanism for propagating cell-cell signals in *Dictyostelium discoideum***  
Yukihisa Hayashida<sup>1</sup>, Chikoo Oosawa<sup>2</sup>, Takuo Yasunaga<sup>2</sup>, Yusuke V Morimoto<sup>2,3</sup>  
<sup>1</sup>Grad. Sch. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Fukuoka, Japan, <sup>2</sup>Dept. Phys. and Info. Eng., Fac. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Fukuoka, Japan, <sup>3</sup>JST, PRESTO, Saitama, Japan

## Poster Sessions

---

---

**\*26P-136 Cellular Guardianship Symphony by the Dynamic Duo of LL37 and HNP-1**

Jing Zhang, Kaori Sugihara  
The University of Tokyo

**26P-137 Slow diffusion and signal amplification on membranes regulated by phospholipase D**

Gen Honda<sup>1</sup>, Satoshi Sawai<sup>1,2</sup>, Miho Yanagisawa<sup>1,2,3</sup>

<sup>1</sup>Department of Basic Science, Graduate School of Arts and Sciences, University of Tokyo, Tokyo, Japan, <sup>2</sup>Research Center for Complex Systems Biology, Graduate School of Arts and Sciences, University of Tokyo, Tokyo, Japan, <sup>3</sup>Komaba Institute for Science, Graduate School of Arts and Sciences, University of Tokyo, Tokyo, Japan

**26P-138 Small extracellular vesicles trigger integrin-mediated adhesion signal in the recipient cells**

Koichiro M Hirose<sup>1</sup>, Yusuke Sato<sup>2</sup>, Eriko Yamaguchi<sup>1</sup>, Naoko Komura<sup>1</sup>, Hiromune Ando<sup>1</sup>, Yasunari Yokota<sup>3</sup>, Kenichi G.N. Suzuki<sup>1,4</sup>

<sup>1</sup>iGCORE, Gifu Univ., Japan, <sup>2</sup>Dept. Chem. Tohoku Univ, Japan, <sup>3</sup>Dept. Eng., Gifu Univ., Japan, <sup>4</sup>Natl. Cancer Ctr. Res. Inst., Japan

### Biological & Artificial membrane: Structure & Property

**\*26P-139 Membrane tension and its effect on a membrane structure**

Zuzana Johanovská<sup>1,2</sup>, David Šťastný<sup>1</sup>, Radek Šachl<sup>1</sup>, Martin Hof<sup>1</sup>

<sup>1</sup>Heyrovský Institute of Physical Chemistry, Czech Academy of Sciences, Prague, Czech Republic, <sup>2</sup>Charles University, Faculty of Mathematics and Physics, Prague, Czech Republic

**\*26P-141 Elucidating the Molecular Mechanism of the Dual Cooperative Effect Between antimicrobials LL37 and HNP1: A Study of Peptide-Lipid and Peptide-Peptide Interactions**

Yuge Hou, Kaori Sugihara

The institute of industrial Science, The University of Tokyo

**26P-142 Dimerization of transmembrane peptides synergistically enhances the lipid scrambling activities**

Hiroyuki Nakao<sup>1</sup>, Toshiki Tsujii<sup>1</sup>, Hiroaki Saito<sup>2</sup>, Keisuke Ikeda<sup>1</sup>, Minoru Nakano<sup>1</sup>

<sup>1</sup>Faculty of Pharmaceutical Sciences, University of Toyama, Toyama, Japan, <sup>2</sup>Faculty of Pharmaceutical Sciences, Hokuriku University, Ishikawa, Japan

## Wednesday, June 26

- 26P-143**     **Mechanism of action and lipid-mediated synergistic interactions of antimicrobial peptides: New regulatory mechanisms also for membrane proteins?**  
Burkhard Bechinger<sup>1,2</sup>  
<sup>1</sup>University of Strasbourg / CNRS, Chemistry UMR7177, <sup>2</sup>Institut Universitaire de France IUF
- 26P-144**     **Impact of Acetonitrile Molecules on Miscibility Transition Temperature of Multicomponent Lipid Vesicles**  
Shota Matsuzawa<sup>1</sup>, Kazunari Yoshida<sup>1,2</sup>  
<sup>1</sup>Faculty of Engineering, Yamagata University, <sup>2</sup>Graduate School of Science and Engineering, Yamagata University

### Biological & Artificial membrane: Dynamics

- \*26P-145**     **Effect of actin encapsulation on the behavior of lipid bilayers under osmotic stress**  
Ken Bessho, Mahito Kikumoto, Yuki Mizutani, Moka Ito, Kingo Takiguchi  
Nagoya Univ., Grad. Sch. Sci., Dept. Bio. Sci.
- \*26P-146**     **PORE-FORMING ACTIVITIES OF  $\beta$ -HAIRPIN ANTIMICROBIAL PEPTIDES EVALUATED BY LIPID BILAYER SYSTEM**  
Yuki Hagiri, Wakana Hashimoto, Ryuji Kawano  
Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Tokyo, Japan
- \*26P-147**     **Synthesis of fluorescence-derivative of DHA-containing phospholipids and its behavior in lipid bilayers.**  
Kotaro Shimizu, Masanao Kinoshita, Nobuaki Matsumori  
Kyushu University
- \*26P-148**     **Morphological change in liposomes that encapsulating F-actins with the adjusted length distribution**  
Yuki Mizutani<sup>1</sup>, Moka Ito<sup>1</sup>, Mahito Kikumoto<sup>1</sup>, Masahito Hayashi<sup>2</sup>, Kingo Takiguchi<sup>1</sup>  
<sup>1</sup>Nagoya Univ., Grad. Sch. Sci., Dept. Bio Sci., <sup>2</sup>Hosei Univ.
- 26P-149**     **Membrane viscosity of phase-separated ternary GUVs having Lo domains as the basis for lipid rafts**  
Julia Tanaka, Yuka Sakuma  
Department of Physics, Tohoku University

# Poster Sessions

---

---

## Biological & Artificial membrane: Excitation & Channels

**26P-150**      **Development of a high-throughput device for recording channel currents using agarose gel beads**

Mami Asakura<sup>1</sup>, Wang Shuyan<sup>2</sup>, Minako Hirano<sup>2</sup>, Toru Ide<sup>2</sup>

<sup>1</sup>Dept. of Comp. Tech. Soln., Okayama Univ., <sup>2</sup>Grad. Sch. Health Sys., Okayama Univ.

## Biological & Artificial membrane: Transport & Signal transduction

**\*26P-151**      **The fusion site of cell penetrating peptide sequences affects the cytoplasmic transport**

Akari Miwa, Koki Kamiya

Graduate School of Science and Technology, Gunma University, Gunma, Japan

## Membraneless Organelle, autophagy, Liquid-liquid phase separation

**\*26P-152**      **Phase separation and phase transition of protein mixture on chemically modified glass surfaces**

Toya Yoshida, Tomohiro Nobeyama, Kentaro Shiraki

Institute of Pure and Applied Sciences, University of Tsukuba

**\*26P-153**      **Quantitative analysis of lipophagy by a small molecule fluorescent reporter**

Siyang Ding<sup>1</sup>, Jesse Rudd-Schmidt<sup>2</sup>, Oana Sanislav<sup>3</sup>, Jinyun Zou<sup>2</sup>,

Tze Cin Owyong<sup>1</sup>, Ebony Monson<sup>3</sup>, Karla Helbig<sup>3</sup>, Paul Fisher<sup>3</sup>, Ian Ganley<sup>4</sup>, Kazuhide Shaun Okuda<sup>1,5,6</sup>, Iliia Voskoboinik<sup>2,6</sup>, Yuning Hong<sup>1</sup>

<sup>1</sup>Department of Biochemistry and Chemistry, La Trobe Institute for Molecular Science, La Trobe University, Melbourne, VIC, Australia, <sup>2</sup>Killer Cell Biology Laboratory, Cancer Immunology Program, Peter MacCallum Cancer Centre, Melbourne, VIC, Australia, <sup>3</sup>Department of Microbiology, Anatomy, Physiology and Pharmacology, La Trobe University, Melbourne, VIC, Australia, <sup>4</sup>MRC Protein Phosphorylation and Ubiquitylation Unit, University of Dundee, Dundee, UK, <sup>5</sup>Organogenesis and Cancer Program, Peter MacCallum Cancer Centre, Melbourne, VIC, Australia, <sup>6</sup>Sir Peter MacCallum Department of Oncology, University of Melbourne, Parkville, VIC, Australia

**\*26P-154**      **Quantitative Raman analyses and photo-regulation of nucleic acid-peptide droplets formed by liquid-liquid phase separation**

Kohei Yokosawa, Shinya Tahara, Shinji Kajimoto, Takakazu Nakabayashi

Graduate School of Pharmaceutical Sciences, Tohoku University, Japan



**Wednesday, June 26**

- \*26P-155** **A new method for structural switching of multiphase coacervates based on rational design of charged polypeptides**  
Hinano Nakamoto<sup>1</sup>, Hiroshi Kamizawa<sup>1</sup>, Takumi Yamada<sup>1</sup>, Biplab K C<sup>2</sup>, Teruki Nii<sup>2</sup>, Takeshi Mori<sup>2,3</sup>, Yoshiki Katayama<sup>2,3,4,5</sup>, Akihiro Kishimura<sup>2,3,4</sup>  
<sup>1</sup>Graduate School of Systems Life Sciences, Kyushu University, <sup>2</sup>Faculty of Engineering, Kyushu University, <sup>3</sup>Center for Future Chemistry, Kyushu University, <sup>4</sup>Center for Molecular Systems, Kyushu University, <sup>5</sup>Center for Advanced Medical Open Innovation, Kyushu University
- 26P-156** **Tunable Wetting Properties in Multicomponent Protein Condensates**  
Ding Wang<sup>1,2</sup>, Lei-Han Tang<sup>1</sup>  
<sup>1</sup>Department of Physics, Hong Kong Baptist University, Hong Kong SAR, China, <sup>2</sup>Department of Materials Science and Engineering, Southern University of Science and Technology, Shenzhen, China
- 26P-157** **Super enhancer-derived lncRNA CCAT1-L regulates the condensation of human Mediator**  
 Junho Lee  
 Korea Advanced Institute of Science and Technology (KAIST)
- 26P-158** **Metastable phase-separated droplet generation and long-time DNA enrichment by laser-induced Soret effect**  
Mika Kobayashi<sup>1,2</sup>, Yoshihiro Minagawa<sup>2</sup>, Hiroyuki Noji<sup>2</sup>  
<sup>1</sup>Tokyo University of Agriculture and Technology, <sup>2</sup>University of Tokyo

**Neuroscience & Sensory systems**

- \*26P-159** **High-speed AFM reveals activity-dependent stable complexes of kinase domains in CaMKII $\beta$**   
Keisuke Matsushima<sup>1</sup>, Hideji Murakoshi<sup>2</sup>, Mikihiro Shibata<sup>3,4</sup>  
<sup>1</sup>Graduate School of Natural Science and Technology, Kanazawa University, Ishikawa, Japan, <sup>2</sup>Supportive Center for Brain Research, National Institute for Physiological Sciences, Aichi, Japan, <sup>3</sup>WPI Nano Life Science Institute, Kanazawa University, Ishikawa, Japan, <sup>4</sup>Institute for Frontier Science Initiative, Kanazawa University, Ishikawa, Japan
- \*26P-160** **Molecular mechanism of classical conditioning in earthworm**  
Sukehiro Kabayama, Yoshiichiro Kitamura  
 Kanto-Gakuin University

## Poster Sessions

---

---

**26P-161 Ion-channel-based complete synchronization between neurons**

Seido Nagano

Department of Bioinformatics, Ritsumeikan University

**26P-162 Models of complex structure-related diffusion anomalies of transport in the brain's extracellular space**

Eugene B Postnikov<sup>1</sup>, Igor Sokolov<sup>2</sup>, Anastasia Lavrova<sup>3</sup>, Dmitry Postnov<sup>4</sup>

<sup>1</sup>Kursk State University, <sup>2</sup>Humboldt University Berlin, <sup>3</sup>Saint-Petersburg State Research Institute of Phthisiopulmonology, <sup>4</sup>Saratov State University

### Neuronal circuit & Information processing

**\*26P-163 Outgrowth order in breaking symmetry of immature neurites is another regulation factor of neuronal polarity formation**

Soya Hagiwara<sup>1</sup>, Ryohei Yamazaki<sup>2</sup>, Nanami Abe<sup>2</sup>, Naoya Takada<sup>1</sup>, Kenji Yasuda<sup>1,2</sup>

<sup>1</sup>Dept. Phys., Sch. Adv. Sci. & Eng., Waseda Univ., Japan, <sup>2</sup>Dept. Pure & Appl. Phys., Grad. Schl. Adv. Sci. & Eng., Waseda Univ., Japan

**26P-164 Large-scale voltage-sensitive dye imaging of mouse prefrontal cortex: Biophysical mapping of intra- and inter-hemispheric connections**

Takashi Tominaga<sup>1,2</sup>, Pooja Gusain<sup>1</sup>, Makiko Taketoshi<sup>1</sup>, Yoko Tominaga<sup>1</sup>

<sup>1</sup>Institute of Neuroscience, Tokushima Bunri University, Sanuki, Japan, <sup>2</sup>Kagawa School of Pharmaceutical Sciences, Tokushima Bunri University, Sanuki, Japan

### Behavior

**\*26P-165 Swimming ciliate, Stentor selects anchoring sites accompanied by extracellular geometries**

Syun Echigoya<sup>1</sup>, Katsuhiko Sato<sup>1,2</sup>, Toshiyuki Nakagaki<sup>1</sup>, Yukinori Nishigami<sup>1</sup>

<sup>1</sup>RIES Hokkaido University, Sapporo, Japan, <sup>2</sup>University of Toyama, Japan

### Photobiology: Vision & Photoreception

**\*26P-166 Electrophysiological Study of the Effect of Weak Organic Acids on the Transport Activity of Proton Pumping Rhodopsin of Rhizobacteria**

Zikun Lyu, Shunki Takaramoto, María del Carmen Marín, Hiromu Yawo, Keiichi Inoue

The Institute for Solid State Physics, University of Tokyo, Kashiwa, Japan

## Wednesday, June 26

---

- \*26P-167**     **Structural basis for early proton transfer reaction on a primate blue-sensitive pigment**  
Yosuke Mizuno<sup>1</sup>, Hiroo Imai<sup>2</sup>, Hideki Kandori<sup>1,3</sup>, Kota Katayama<sup>1,3</sup>  
<sup>1</sup>Graduate school of Engineering, Nagoya Institute of Technology, Aichi, Japan,  
<sup>2</sup>Center for the Evolutionary Origins of Human Behavior, Kyoto University, Aichi, Japan,  
<sup>3</sup>OptoBio Technology Research Center, Nagoya Institute of Technology, Aichi, Japan
- \*26P-168**     **Time-resolved crystallography uncovering cryptochrome signal transduction mechanism**  
Yuhei Hosokawa<sup>1,2,3</sup>, Po-Hsun Wang<sup>2,4</sup>, Mai Nakamura<sup>3</sup>,  
Nicolas Caramello<sup>5</sup>, Sylvain Engilberge<sup>5</sup>, Antoine Royant<sup>5</sup>,  
Lars-Oliver Essen<sup>4</sup>, Ming-Daw Tsai<sup>2</sup>, Junpei Yamamoto<sup>3</sup>,  
Manuel Maestre-Reyna<sup>1,2</sup>  
<sup>1</sup>National Taiwan University, Taipei, Taiwan, <sup>2</sup>Academia Sinica, Taipei, Taiwan, <sup>3</sup>Osaka University, Osaka, Japan, <sup>4</sup>Philipps University Marburg, Marburg, Germany,  
<sup>5</sup>European Synchrotron Radiation Facility, Grenoble, France
- \*26P-169**     **Light-induced difference FTIR analysis of xenorhodopsin from Nanosalina at 77 K**  
Yuma Ito<sup>1</sup>, Tatsuro Nishikino<sup>1,2</sup>, Hideki Kandori<sup>1,2</sup>, Yuji Furutani<sup>1,2</sup>  
<sup>1</sup>Department of Life Science and Applied Chemistry, Nagoya Institute of Technology,  
<sup>2</sup>OptoBioTechnology Research Center, Nagoya Institute of Technology
- 26P-170**     **Spectroscopic and functional characterization of novel viral rhodopsins**  
Takashi Nagata<sup>1</sup>, Shunki Takaramoto<sup>1</sup>, Andrey Rozenberg<sup>2</sup>, Oded Béjà<sup>2</sup>,  
Keiichi Inoue<sup>1</sup>  
<sup>1</sup>The Institute for Solid State Physics, The University of Tokyo, Japan, <sup>2</sup>Faculty of Biology, Technion - Israel Institute of Technology, Israel
- 26P-171**     **Modulation of intracellular calcium responses using photocyclic vertebrate visual pigments**  
Kazumi Sakai, Shion Aoki, Takahiro Yamashita  
Kyoto University

# Poster Sessions

## Photobiology: Photosynthesis

- \*26P-172** **Carotenoids binding effect of the photoreaction processes on Xanthorhodopsin**  
Shota Itakura<sup>1</sup>, Yosuke Mizuno<sup>1</sup>, Kota Katayama<sup>1,2</sup>, Rei Abe-Yoshizumi<sup>1</sup>, Ariel Chazan<sup>3</sup>, Oded Bèjà<sup>3</sup>, Hideki Kandori<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, Aichi, Japan, <sup>2</sup>OptoBioTechnology Research Center, Aichi, Japan, <sup>3</sup>Technion-Israel Institute of Technology, Haifa, Israel
- \*26P-173** **Mobility of protein complexes in plant thylakoid membranes analyzed by high-speed atomic force microscopy**  
Yudai Nishitani, Daisuke Yamamoto  
Fac. Sci., Fukuoka Univ., Fukuoka, Japan
- \*26P-174** **Excitation energy transfer dynamics among antenna pigments in the  $\Delta$ pshX-reaction center from *Heliumicrobium modesticaldum***  
Risa Kojima<sup>1</sup>, Kevin E Redding<sup>2</sup>, Daisuke Kosumi<sup>3</sup>, Hirozo Oh-oka<sup>4</sup>  
<sup>1</sup>College of Life Science, Ritsumeikan University, Shiga, Japan, <sup>2</sup>School of Molecular Sciences, Arizona State University, Arizona, USA, <sup>3</sup>Institute of Industrial Nanomaterials, Kumamoto University, Kumamoto, Japan, <sup>4</sup>Center for Education in Liberal Arts and Sciences, Osaka University, Osaka, Japan
- 26P-175** **Structural Basis for Enabling Photosynthesis with Extremely Low-energy Near-infrared Light in the LH1–RC Complex of a Thermophilic Purple Nonsulfur Bacterium**  
Yukihiro Kimura<sup>1</sup>, Ryo Kanno<sup>2</sup>, Kaisei Mori<sup>1</sup>, Ryuta Seto<sup>1</sup>, Yoshiaki Matsuda<sup>1</sup>, Shinji Takenaka<sup>1</sup>, Hiroyuki Mino<sup>3</sup>, Malgorzata Hall<sup>4</sup>, Endang R. Purba<sup>4</sup>, Akira Mizoguchi<sup>5</sup>, Bruno M. Humbel<sup>6</sup>, Michael T. Madigan<sup>7</sup>, Zheng-Yu Wang-Otomo<sup>8</sup>, Kazutoshi Tani<sup>9</sup>  
<sup>1</sup>Graduate School of Agriculture, Kobe University, Nada, Kobe, Japan, <sup>2</sup>Quatum Wave Microscopy Unit, Okinawa Institute of Science and Technology Graduate University (OIST), Onna-son, Kunigami-gun, Okinawa, Japan, <sup>3</sup>Graduate school of Science, Nagoya University, Furocyo, Chikusa, Nagoya, Japan, <sup>4</sup>Scientific Imaging Section, Research Support Division, OIST, Onna-son, Kunigami-gun, Okinawa, Japan, <sup>5</sup>Graduate School of Medicine, Mie University, Tsu, Japan, <sup>6</sup>Provost Office, OIST, Onna-son, Kunigami-gun, Okinawa, Japan, <sup>7</sup>School of Biological Sciences, Program in Microbiology, Southern Illinois University, Carbondale, IL 62901 USA, <sup>8</sup>Faculty of Science, Ibaraki University, Mito, Japan, <sup>9</sup>Center for Computational Sciences, University of Tsukuba, Tsukuba, Japan

**Wednesday, June 26****26P-176 Characterization of an LH1–RC photocomplex from a novel Japanese hot spring purple sulfur bacterium, *Caldichromatium japonicum***

Akane Minamino<sup>1</sup>, Mohit. K. Saini<sup>2</sup>, Endang R. Purba<sup>3</sup>, Malgorzata Hall<sup>3</sup>, Shinji Takenaka<sup>1</sup>, Vera Thiel<sup>4</sup>, Bruno M. Humbel<sup>5</sup>, Michael T. Madigan<sup>6</sup>, Zheng-Yu Wang-Otomo<sup>7</sup>, Kazutoshi Tani<sup>8</sup>, Yukihiro Kimura<sup>1</sup>

<sup>1</sup>Department of Agrobioscience, Graduate School of Agriculture, Kobe University, Nada, Kobe, Japan, <sup>2</sup>Institute of Microbiology, Centre Algatech, Czech Republic, <sup>3</sup>Scientific Imaging Section, Research Support Division, Okinawa Institute of Science and Technology Graduate University (OIST), Onna-son, Kunigami-gun, Okinawa, Japan, <sup>4</sup>Leibniz Institute, DSMZ-German Collection of Microorganisms and Cell Cultures, Braunschweig, Germany, <sup>5</sup>Provost Office, OIST, Onna-son, Kunigami-gun, Okinawa, Japan, <sup>6</sup>School of Biological Sciences, Program in Microbiology, Southern Illinois University, Carbondale, IL, USA, <sup>7</sup>Faculty of Science, Ibaraki University, Mito, Japan, <sup>8</sup>Center for Computational Sciences, University of Tsukuba, Tsukuba, Japan

**Photobiology: Optogenetics & Optical control****\*26P-177 Channel gating mechanism of K<sup>+</sup> selective channelrhodopsin, KCR**

Ryotaro Shimamura<sup>1</sup>, Shoko Hososhima<sup>1,2</sup>, Hideki Kandori<sup>1,2</sup>, Satoshi Tsunoda<sup>1,2</sup>

<sup>1</sup>Department of Life Science and Applied Chemistry, Nagoya Institute of Technology, <sup>2</sup>Opto Bio Technology Research Center, Nagoya Institute of Technology

**\*26P-178 In vivo single-cell 3D optogenetics technology with light-field microscopy**

Tomoyoshi Inoue<sup>1</sup>, Ryuki Imamura<sup>1</sup>, Naoya Kataoka<sup>2</sup>, Akihiro Fukushima<sup>2</sup>, Shin Usuki<sup>3</sup>, Takuma Sugi<sup>1</sup>

<sup>1</sup>Program of Biomedical Science, Graduate School of Integrated Sciences for Life, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Department of Integrative Physiology, Nagoya University Graduate School of Medicine, Aichi, Japan, <sup>3</sup>Research Institute of Electronics, Shizuoka University, Shizuoka, Japan

**26P-179 Identification of the important region for photoactivity in photoactivated adenylyl cyclase**

Minako Hirano<sup>1</sup>, Masumi Takebe<sup>2</sup>, Hinase Kondo<sup>1</sup>, Mami Asakura<sup>3</sup>, Toru Ide<sup>1</sup>

<sup>1</sup>Grad. Sch. Health Sys., Okayama University, <sup>2</sup>Hamamatsu Photonics K.K., <sup>3</sup>Dept. of Comp. Tech. Soln., Okayama University

# Poster Sessions

---

---

## Radiobiology & Active oxygen

**26P-180**      **Verification of the dosimetry techniques using GAFCHROMIC films for the study of the mechanism of the FLASH effect with synchrotron radiation**

Munetoshi Maeda<sup>1</sup>, Ryoichi Hirayama<sup>2</sup>, Ayumi Shiro<sup>3</sup>, Mika Maeda<sup>1</sup>, Masanori Tomita<sup>4</sup>

<sup>1</sup>The Wakasa Wan Energy Research Center, Fukui, Japan, <sup>2</sup>National Institutes for Quantum Science and Technology, Chiba, Japan, <sup>3</sup>National Institutes for Quantum Science and Technology, Hyogo, Japan, <sup>4</sup>Central Research Institute of Electric Power Industry, Chiba, Japan

## Origin of life & Evolution

**\*26P-181**      **Observation of Fatty Acid Vesicle Condensation on the Surface of Simulated Hydrothermal Vent Minerals**

Shunto Harada<sup>1,2</sup>, Hye-Eun Lee<sup>1,2</sup>, Yamei Li<sup>1,2</sup>, Ryuhei Nakamura<sup>1,2</sup>

<sup>1</sup>Earth-Life Science Institute (ELSI), Tokyo Institute of Technology, <sup>2</sup>RIKEN Center for Sustainable Resource Science

**\*26P-182**      **Genome reduction increases parasite sensitivity and promotes the evolution of endosymbiotic mutualism**

Yuki Kanai<sup>1</sup>, Chikara Furusawa<sup>2,3</sup>

<sup>1</sup>Department of Biological Sciences, Graduate School of Science, The University of Tokyo, <sup>2</sup>Universal Biology Institute, Graduate School of Science, The University of Tokyo, <sup>3</sup>Center for Biosystem Dynamics Research, RIKEN

**\*26P-183**      **Proofreading inherited by template-directed ligation**

Hiroyuki Aoyanagi, Yasuhiro Magi, Shoichi Toyabe

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

**26P-184**      **The Relation Between Biology and Physics: Origins of Life Research and its Philosophical Implications**

Julieta Macome

Department of History and Philosophy of Science, Cambridge University, CB2 3RH Cambridge, UK

## Wednesday, June 26

### Synthetic biology & Artificial cells

- \*26P-185**     **Control of lipid membrane composition in vesicles by external stimulations**  
Sumin Lee, Koki Kamiya  
Graduate School of Science and Engineering, Gunma University, Gunma, Japan
- \*26P-186**     **Construction of enzymatically assembled gel-in-liposome as artificial Cell model**  
Wancheng Zhang<sup>1</sup>, Aileen Cooney<sup>2</sup>, Lorenzo Di Michele<sup>3</sup>, Yuval Elani<sup>2</sup>, Tomoaki Matsuura<sup>1</sup>  
<sup>1</sup>Earth-life Science Institute, Tokyo Institute of Technology, <sup>2</sup>Department of Chemical Engineering, Imperial College London, <sup>3</sup>Department of Chemical Engineering and Biotechnology, University of Cambridge
- \*26P-187**     **Creation of cell-sized droplets entrapping DNA or living cells through phase separation under one-dimensional confinement**  
Mayu Shono  
Department of Chemical Engineering and Materials Science, Doshisha University, Kyoto, Japan
- \*26P-188**     **TOWARD THE CONSTRUCTION OF A SELF-REPLICATING SYSTEM DRIVEN BY GENE EXPRESSION OF REPLICATION CYCLE REACTION (RCR)**  
Yuya Yamahishi, Sonoyama Naoki, Kawakami Naoki, Hasebe Tomonori, Su'etsugu Masayuki  
College of Science, Rikkyo University, Tokyo, Japan
- 26P-189**     **Analysis of biochemical reaction in liposomes after terahertz wave irradiation**  
Gakushi Tsuji<sup>1,2</sup>, Masaya Oki<sup>1,2</sup>, Yuusuke Yamaguchi<sup>3</sup>  
<sup>1</sup>Department of Applied Chemistry and Biotechnology, Graduate School of Engineering, University of Fukui, <sup>2</sup>Life Science innovation center, University of Fukui, Fukui, Japan, <sup>3</sup>Research Center for Development of Far-infrared Region, University of Fukui, Fukui, Japan

# Poster Sessions

---

---

**26P-190**      **Cation-selective pores from POSS-decorated amphiphilic diblock copolymers**

[Denis G Knyazev](#)<sup>1</sup>, Nora Hagleitner-Ertuğrul<sup>1</sup>, Asad Ullah<sup>2</sup>,  
Nikolaus Goessweiner-Mohr<sup>1</sup>, Hazrat Hussain<sup>2</sup>, Peter Pohl<sup>1</sup>

<sup>1</sup>Institute of Biophysics, Johannes Kepler University Linz, Gruberstr. 40, 4020, Linz, Austria, <sup>2</sup>Department of Chemistry, Quaid-i-Azam University Islamabad, 45320, Islamabad, Pakistan

## Computational biology: Bioinformatics

**\*26P-191**      **Learning What AlphaFold2 Learned**

Nozaki Kosei

Department of Applied Physics, Graduate School of Engineering, Nagoya University.

**\*26P-192**      **Theoretical Insights into Conformational Changes in SOD1 Involved in the Pathological Mechanism of Amyotrophic Lateral Sclerosis: Residue Interaction Network Analysis**

[Shun Fujimaki](#), Norifumi Yamamoto

Chiba Tech

**26P-193**      **Analysis of protein-protein interaction search space by ensemble docking**

[Nobuyuki Uchikoga](#)<sup>1</sup>, Yuri Matsuzaki<sup>2</sup>

<sup>1</sup>Dept Network Design, Sch Interdiscip Math Sci, Meiji Univ., <sup>2</sup>Tokyo Tech. Acad. for Leadership, Tokyo Inst. Tech

## Computational biology: Molecular simulation

**\*26P-194**      **Experimental and Computational Predictions of the Intrinsic Reactivity of Small Molecules with Lipid Membranes**

[Yeshurun Amarasingham Tanna](#), John Sanderson, Mark Wilson

Department of Chemistry, University of Durham (UK)

**\*26P-195**      **Multiphase condensate formation of postsynaptic density: a comparative study of protein assembly in 3D and 2D systems**

[Risa Yamada](#), Shoji Takada

Department of Biophysics, Graduate School of Science, Kyoto University, Kyoto, Japan



## Wednesday, June 26

- \*26P-196**     **Molecular simulations of TMEM16A channel blockers**  
 Tanadet Pipatpolkai  
 School of Physical and Mathematical Science, Department of Physics and Applied Physics, Nanyang Technological University, Singapore, 637371
- \*26P-197**     **Different behavior of dissociation pathways of glutamine and glutamate in complex with Medaka Taste Receptor T1R**  
 Duy Phuoc Tran<sup>1</sup>, Vi Toan Lam<sup>1</sup>, Hao Thai Nguyen<sup>1</sup>, Akio Kitao<sup>1</sup>, Atsuko Yamashita<sup>2</sup>  
<sup>1</sup>Life Science & Technology, Tokyo Institute of Technology, Japan, <sup>2</sup>Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, Japan
- \*26P-198**     **Decoding Peptide Solvation Dynamics: Uncovering the Influence of Hydrophobic Forces and Addressing Solvation Complexity via Multiway Statistical Analysis Techniques.**  
Monika Phougat<sup>1</sup>, Narinder Singh Sahni<sup>1</sup>, Devapriya Choudhury<sup>2</sup>  
<sup>1</sup>School of Computational & Integrative Sciences, Jawaharlal Nehru University, New Delhi, India, <sup>2</sup>School of Biotechnology, Jawaharlal Nehru University, New Delhi, India
- \*26P-199**     **Ubiquinone/ubiquinol exchange pathway in the photosynthetic RC-LH1 supercomplex**  
Yosuke Teshirogi, Yoshitaka Moriwaki, Tohru Terada  
 Dept. of Biotechnol., Grad. Sch. of Agri and Life Science., The Univ. of Tokyo
- \*26P-200**     **Spectrum analyses on the non-linear response of a red blood cell model**  
Tetsuya Yamamoto, Hiroshi Watanabe  
 Keio University
- \*26P-201**     **Lipid-protein interaction fingerprints for the Kv7 ion channels**  
Ali Saad Kusay<sup>1</sup>, Lucie Delemotte<sup>2</sup>, Sara Liin<sup>1</sup>  
<sup>1</sup>Division of Neurobiology, Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden, <sup>2</sup>Science for Life Laboratory, Department of Applied Physics, KTH Royal Institute of Technology, Solna, Sweden
- \*26P-202**     **A drug design strategy based on in vitro and in silico studies applied to the development of inhibitors against alpha-glucosidase and alpha-amylase receptors of diabetics from selected Metformin derivatives.**  
 Nor Akmalayati Sulong<sup>1,2</sup>  
<sup>1</sup>Department of Chemistry, Quantum Information Science and Technology (QIST), Faculty of Science, University Malaya, 50603 Kuala Lumpur, Malaysia, <sup>2</sup>Institute for Molecular Science, Myodaiji, Okazaki 444-8787, Japan

# Poster Sessions

---

- \*26P-203**    **Molecular Dynamics Study on the Solvent Influence and Stability of the Aspirin-Hydroxypropyl- $\beta$ -Cyclodextrin Complex Structure**  
Helmia Jayyinnisya, Dedy Rendrawan, Lince Meriko, Kazutomo Kawaguchi, Hidemi Nagao  
Graduate School of Mathematical and Physical Science, Kanazawa University, Kanazawa, Japan
- \*26P-204**    **Molecular dynamics calculations of peptides self-assembling on boron nitride surfaces**  
Hiroki Maeda<sup>1</sup>, Chishu Homma<sup>1</sup>, Eiji Yamamoto<sup>2</sup>, Yuhei Hayamizu<sup>1</sup>  
<sup>1</sup>Tokyo Tech, <sup>2</sup>Keio University
- \*26P-205**    **Docking and Molecular Dynamics Simulation Study of BAK1 and BRI1 Proteins in Arabidopsis thaliana Plant**  
Lince - Meriko, Helmia Jayyinnisya, Dedy Rendrawan, Kazutomo Kawaguchi, Hidemi Nagao  
Kanazawa University
- 26P-206**    **Hydrogen Bond Energies in Helical Secondary Structures Dissected by Negative Fragmentation Approach and Density Functional Theory**  
Hiroko X Kondo<sup>1</sup>, Haruki Nakamura<sup>2</sup>, Yu Takano<sup>3</sup>  
<sup>1</sup>Kitami Institute of Technology, <sup>2</sup>Institute for Protein Research, <sup>3</sup>Hiroshima City University
- 26P-207**    **Insight into structural propagating mechanism of photoactivated adenylate cyclase OaPAC by microsecond molecular simulation.**  
Akiya Fukuda<sup>1</sup>, Masahiko Taguchi<sup>1,2,3</sup>, Shun Sakuraba<sup>3</sup>, Justin Chan<sup>3</sup>, Eriko Nango<sup>1,2,4</sup>, Hidetoshi Kono<sup>3</sup>  
<sup>1</sup>Graduate School of Science, Tohoku University, <sup>2</sup>Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, <sup>3</sup>Institute for Quantum Life Science, National Institutes for Quantum Science and Technology, <sup>4</sup>RIKEN SPring-8 Center
- 26P-208**    **Integration of AlphaFold with Molecular Dynamics for Sampling Conformational States of Transporter Proteins**  
Jun Ohnuki, Kei-ichi Okazaki  
Institute for Molecular Science, National Institutes of Natural Sciences, Okazaki, Japan

**Wednesday, June 26**

- 26P-209**      **Molecular simulations of cholesterol recognition by SREBP cleavage-activating protein**  
 Charal Khiewdee<sup>1</sup>, Puey Ounjai<sup>1</sup>, Tanadet Pipatpolkai<sup>2</sup>  
<sup>1</sup>Department of Biology, Faculty of Science, Mahidol University, Bangkok, Thailand 10400, <sup>2</sup>The School of Physical and Mathematical Sciences (SPMS), Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798
- 26P-210**      **Development and Application of a Protocol for Predicting Membrane Permeability of Cyclic Peptides Based on Molecular Dynamics Simulations**  
 Masatake Sugita<sup>1,2</sup>, Takuya Fujie<sup>1,2</sup>, Keisuke Yanagisawa<sup>1,2</sup>, Masahito Ohue<sup>1,2</sup>, Yutaka Akiyama<sup>1,2</sup>  
<sup>1</sup>Department of Computer Science, School of Computing, Tokyo Institute of Technology, W3-34, 2-12-1, Ookayama, Meguro-ku, Tokyo, Japan, <sup>2</sup>Middle Molecule IT-based Drug Discovery Laboratory (MIDL), Tokyo Institute of Technology, W8-76, 2-12-1, Ookayama, Meguro-ku, Tokyo, Japan
- 26P-211**      **Impact of glycan shielding on antibody epitopes on viral envelope proteins revealed by molecular dynamics simulations**  
 Suyong Re<sup>1</sup>, Kenji Mizuguchi<sup>1,2</sup>  
<sup>1</sup>Artificial Intelligence Center for Health and Biomedical Research, National Institutes of Biomedical Innovation, Health, and Nutrition, Osaka, Japan, <sup>2</sup>Institute for Protein Research, Osaka University, Osaka, Japan
- 26P-212**      **Hybrid of Manifold Learning and Molecular Simulation to Reconstruct the Protein Conformational Change using Cryo-Electron Microscopy Experiment**  
 Takashi Yoshidome  
 Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan
- 26P-213**      **Elucidating the Importance of Water Models in Protein-ATP Interactions in High ATP Concentrations**  
 Toshifumi Mori<sup>1,2</sup>, Norio Yoshida<sup>3</sup>  
<sup>1</sup>Institute for Materials Chemistry and Engineering, Kyushu University, <sup>2</sup>Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, <sup>3</sup>Graduate School of Informatics, Nagoya University
- 26P-214**      **Fast Computational Method for the Hydration Free Energy**  
 Taichi Ito, Takashi Yoshidome  
 Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan

## Poster Sessions

---

---

**26P-215**      **Molecular dynamics method for studying a flow on lipid bilayer**

Masaki Otawa<sup>1,2</sup>, Satoru G. Itoh<sup>1,2,3</sup>, Hisashi Okumura<sup>1,2,3</sup>

<sup>1</sup>The Graduate University for Advanced Studies, <sup>2</sup>Institute for Molecular Science, <sup>3</sup>Exploratory Research Center on Life and Living Systems

### Computational biology: Biological modeling and simulation

**\*26P-216**      **Metabolome Analysis in Mice Liver Using Thermodynamics**

Takumi Abekawa<sup>1</sup>, Satoshi Ohno<sup>2</sup>, Shinya Kuroda<sup>1</sup>

<sup>1</sup>Department of Biological Sciences, School of Science, University of Tokyo, Tokyo, Japan, <sup>2</sup>Department of AI Systems Medicine, M&D Data Science Center, Tokyo Medical and Dental University, Tokyo, Japan

**\*26P-217**      **INVESTIGATION OF FACTORS AFFECTING THE QUALITY OF SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY (SPECT) IMAGES: A MONTE CARLO SIMULATION STUDY**

Mercy Amondi<sup>1</sup>, Jared Ombiro<sup>2</sup>, Sankara Aluko<sup>4</sup>, Duke Oeba<sup>3</sup>

<sup>1</sup>School of Pure, Applied and Health Sciences, Maasai Mara University. P.O. Box 861-20500, Narok, Kenya. [mercyamondi161@gmail.com](mailto:mercyamondi161@gmail.com), <sup>2</sup>School of Pure, Applied and Health Sciences, Maasai Mara University. P.O. Box 861-20500, Narok, Kenya. Email [gwaomb@mmarau.ac.ke](mailto:gwaomb@mmarau.ac.ke), <sup>3</sup>Physics Department, Egerton University, P.O. Box 536-20115, Njoro Kenya. Email [dukeoeba@gmail.com](mailto:dukeoeba@gmail.com), <sup>4</sup>School of Pure, Applied and Health Sciences, Maasai Mara University. P.O. Box 861-20500, Narok, Kenya. Email [sankaraangiro@gmail.com](mailto:sankaraangiro@gmail.com)

**\*26P-218**      **Elucidating the adaptive mechanical behaviors of actomyosin bundles in cells**

Shihang Ding<sup>1</sup>, Taeyoon Kim<sup>2</sup>, Shinji Deguchi<sup>1</sup>

<sup>1</sup>Graduate School of Engineering Science, Osaka University, Osaka, Japan, <sup>2</sup>Weldon School of Biomedical Engineering, Purdue University, West Lafayette, Indiana, USA

**\*26P-219**      **Development of a Protein Language Model-Based Thermal Stability Prediction Model for Nanobodies**

Yuki Hashidate, Yasuhiro Matsunaga

Graduate School of Science and Engineering, Saitama University, Saitama, Japan

## Wednesday, June 26

- \*26P-221** Prediction of the mutation effects of Indonesian Protein Nsp3 SARS-Unique domain (SUD)-pyridostatin as a ligand interaction via end-point binding free energy calculations  
Dedy Rendrawan, Kazutomo Kawaguchi, Hidemi Nagao  
 Faculty of Mathematics and Physics, Institute of Science and Engineering, Kanazawa University, Japan,
- \*26P-222** Adhesive Active Brownian Particle Model for Cell Populations  
Sota Shimamura<sup>1</sup>, Nen Saito<sup>2,3</sup>, Shuji Ishihara<sup>1,4</sup>  
<sup>1</sup>Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences, Aichi, Japan,, <sup>3</sup>Graduate School of Integrated Sciences for Life, Hiroshima University, Hiroshima, Japan, <sup>4</sup>Universal Biology Institute, The University of Tokyo, Tokyo, Japan
- 26P-223** Estimation of biochemical reaction parameters using a mathematical model of the cell-free translation system  
Shunosuke Ban<sup>1</sup>, Yusuke Himeoka<sup>2</sup>, Tomoaki Matsuura<sup>3</sup>, Yoshihiro Shimizu<sup>4</sup>, Chikara Furusawa<sup>1,2,4</sup>  
<sup>1</sup>Department of Physics, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Universal Biology Institute, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Earth-Life Science Institute, Tokyo Institute of Technology, Tokyo, Japan, <sup>4</sup>Center for Biosystems Dynamics Research, RIKEN, Osaka, Japan
- 26P-224** Coevolution of functionality and foldability of lattice proteins  
 Norifumi Maruyama<sup>1,2</sup>, Macoto Kikuchi<sup>1,2</sup>  
<sup>1</sup>Cybermedia center, Osaka University, <sup>2</sup>Department of Physics, Osaka University
- 26P-225** Live imaging-based inference of mechanical potential of cell-cell interaction in 3D-multicellular systems  
Hiroshi Koyama<sup>1,2</sup>, Toshihiko Fujimori<sup>1,2</sup>  
<sup>1</sup>Div. Embryology, National Institute for Basic Biology, Japan, <sup>2</sup>SOKENDAI (Grad. Univ. Advanced Studies)
- 26P-226** Visualization of protein conformational ensembles using refinement in the information content space: Application to SANXS data  
Tomotaka Oroguchi<sup>1,2</sup>, Rintaro Inoue<sup>3</sup>, Ken Morishima<sup>3</sup>, Masaaki Sugiyama<sup>3</sup>  
<sup>1</sup>Department of Physics, Faculty of Science and Technology, Keio University, <sup>2</sup>RIKEN SPring-8 Center, <sup>3</sup>Institute for Integrated Radiation and Nuclear Science, Kyoto University

# Poster Sessions

## Computational biology: machine learning for molecules or cell systems

- \*26P-227** **Examining Cell Division Dynamics in *Cyanidioschyzon merolae* Through High-Resolution 3D Imaging**  
Jin Kousaka<sup>1</sup>, Atsuko H. Iwane<sup>2</sup>, Yuichi Togashi<sup>1,2</sup>  
<sup>1</sup>Ritsumeikan University, <sup>2</sup>RIKEN Center for Biosystems Dynamics Research
- \*26P-228** **Structure changes in the ABC transporter cycle using nonlinear morphing method, MOVE-DM.**  
Shota Shimogochi<sup>1</sup>, Kazuhi Harai<sup>2</sup>, Ryota Kiyooka<sup>1</sup>, Naoyuki Miyashita<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. BOST, KINDAI Univ., <sup>2</sup>BOST. KINDAI Univ.
- 26P-229** **Predicting Novel PLP-binding Proteins Using Transfer Learning of Graph Neural Network-based Ligand-binding Site Prediction**  
Masafumi Shionyu<sup>1</sup>, Momoka Nakamoto<sup>1</sup>, Atsushi Hijikata<sup>2</sup>,  
Takashi Nakamura<sup>1</sup>, Yukio Mukai<sup>1</sup>  
<sup>1</sup>Graduate School of Bioscience, Nagahama Institute of Bio-Science and Technology, Shiga, Japan, <sup>2</sup>School of Life Sciences, Tokyo University of Pharmacy and Life Science, Tokyo, Japan

## Mathematical & Theoretical biology

- \*26P-230** **Population dynamics of generalist/specialist strategies in the feast-famine cycle**  
Rintaro Niimi<sup>1</sup>, Chikara Furusawa<sup>1,2</sup>, Yusuke Himeoka<sup>1</sup>  
<sup>1</sup>Graduate School of Science, the University of Tokyo, <sup>2</sup>BDR, RIKEN, Japan
- \*26P-231** **Mathematically deriving loop mobility for single protein structures**  
Virginia Apostolopoulou<sup>1</sup>, Nicholas Pearce<sup>2</sup>, Helen Ginn<sup>3</sup>  
<sup>1</sup>Hamburg Centre for Ultrafast Imaging, Universität Hamburg, Luruper Chaussee 149, DE-22761, Hamburg, Germany, <sup>2</sup>Department of Physics, Chemistry and Biology (IFM), Linköping University, SE-581 83 Linköping, Sweden, <sup>3</sup>Deutsches Elektronen-Synchrotron DESY, Notkestraße 85, DE-22607, Hamburg, Germany
- \*26P-232** **Appearance and adaptive properties of bow-tie structures from simple metabolic networks**  
Yudai Iyoda<sup>1</sup>, Chikara Furusawa<sup>1,2</sup>, Yusuke Himeoka<sup>1</sup>  
<sup>1</sup>Graduate School of Science, The University of Tokyo, Japan, <sup>2</sup>BDR, RIKEN, Japan

## Wednesday, June 26

**26P-233**      **Reinforcement learning is a common principle for biological control of complex adaptive systems**

Tomoyuki Yamaguchi

Research Institute, Nozaki Tokushukai Hospital, Osaka, Japan

**26P-234**      **Evaluation of different machine learning models applied to diagnostics and treatment success at the pulmonary tuberculosis**

[Anastasia Lavrova](#)<sup>1</sup>, [Diljara Esmedyeva](#)<sup>1</sup>, [Artem Veselsky](#)<sup>1</sup>, [Pavel Gavrilov](#)<sup>1</sup>, [Eugene Postnikov](#)<sup>2</sup>

<sup>1</sup>Saint-Petersburg State Research Institute of Phthisiopulmonology, Russia, <sup>2</sup>Kursk State University, Russia

### Ecology & Environment

**\*26P-235**      **Analysis of *Alcanivorax borkumensis* Biofilm on Binary Oil-mixtures using Microfluidic Devices**

Rei Shimizu

Graduate School of Sci. and Tech., Univ. of Tsukuba, Tsukuba, Japan

### Nonequilibrium state & Biological rhythm

**26P-236**      **Spiral wave and homogeneous cyclic modes on membrane**

[Hiroshi Noguchi](#)<sup>1</sup>, [Frédéric van Wijland](#)<sup>2</sup>, [Jean-Baptiste Fournier](#)<sup>2</sup>

<sup>1</sup>University of Tokyo, <sup>2</sup>Université Paris Cité

### Measurements

**\*26P-237**      **Hydrogel Colloidosomes from Aqueous Two-Phase Emulsion as New Microreactors for Digital Nucleic Acid Detection**

[Bicheng Zhang](#), [Kanji Tomohara](#), [Hiroyuki Noji](#)

Graduate School of Engineering, The University of Tokyo

**\*26P-238**      **Development for the detection of salivary biomarkers by solid-state nanopore**

[Eiji Kato](#), [Ryo Akita](#), [Sotaro Uemura](#)

Department of Biological Sciences, Graduate School of Science, The University of Tokyo, Tokyo, Japan

## Poster Sessions

---

**26P-239**      **3D structural determination of biological ensembles using high-order spatial correlations in single-particle X-ray scattering**

Wenyang Zhao<sup>1</sup>, Osamu Miyashita<sup>1</sup>, Miki Nakano<sup>1</sup>, Florence Tama<sup>1,2,3</sup>

<sup>1</sup>RIKEN Center for Computational Science, Kobe, Japan, <sup>2</sup>Institute of Transformative Bio-Molecules, Nagoya University, Nagoya, Japan, <sup>3</sup>Graduate School of Science, Nagoya University, Nagoya, Japan

**26P-240**      **IR measurement of flavin mononucleotide aqueous solution by resonance IR method**

Minori Yamakawa, Hirona Takahashi, Konoka Mifune, Makoto Sakai  
Okayama University of Science

**26P-241**      **Selective IR measurement of fluorescent protein chromophores by resonance IR spectroscopy**

Konoka Mifune, Hirona Takahashi, Minori Yamakawa, Makoto Sakai  
Okayama University of Science

### Bioimaging

**\*26P-242**      **Molecular mechanisms of selective binding of extracellular vesicles to cells as revealed by single particle tracking and super resolution microscopy**

Tatsuki Isogai<sup>1</sup>, Koichiro M. Hirose<sup>2</sup>, Miki Kanno<sup>3</sup>, Yasunari Yokota<sup>4</sup>,  
Kenichi G. N. Suzuki<sup>1,2,3,5</sup>

<sup>1</sup>UGSAS, Gifu Univ. Gifu, Japan, <sup>2</sup>iGCORE, Gifu Univ. Gifu, Japan, <sup>3</sup>Grad. Sch. Nat. Sci. Tech., Gifu Univ. Gifu, Japan, <sup>4</sup>Dept. Eng., Gifu Univ. Gifu, Japan, <sup>5</sup>Natl. Cancer Ctr. Res. Inst., Tokyo, Japan

**\*26P-243**      **Development of Fluorescent Thermometers Based on Carbon Quantum Dots with Various Detection Modes**

Yuki S. Kato<sup>1</sup>, Shingo Sotoma<sup>2,3</sup>, Yukiho Shimazaki<sup>3,4</sup>, Shunsuke Chuma<sup>3,4</sup>,  
Kohki Okabe<sup>5</sup>, Madoka Suzuki<sup>3</sup>, Yoshie Harada<sup>3,6,7</sup>

<sup>1</sup>Department of Biological Sciences, School of Science, Osaka University, Osaka, Japan, <sup>2</sup>Faculty of Molecular Chemistry and Engineering, Kyoto Institute of Technology, Kyoto, Japan, <sup>3</sup>Institute for Protein Research, Osaka University, Osaka, Japan, <sup>4</sup>Department of Biological Sciences, Graduate School of Science, Osaka University, Osaka, Japan, <sup>5</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan, <sup>6</sup>Center for Quantum Information and Quantum Biology, Osaka University, Osaka, Japan, <sup>7</sup>Premium Research Institute for Human Metaverse Medicine (WPI-PRIME), Osaka University, Osaka, Japan



**Wednesday, June 26**

- \*26P-244** **Nanoendoscopy-AFM Measurements of Live Cells: Impact on Proliferation and Stress Response**  
 Mohammad Mubarak Hosain, Takehiko Ichikawa, Takeshi Fukuma  
 Nano Life Science, Kanazawa University
- \*26P-245** **Miniaturization of the laser spot for cantilever deflection detection to realize ultra-high-speed AFM**  
 Karen Kamoshita<sup>2</sup>, Kenichi Umeda<sup>1</sup>, Noriyuki Kodera<sup>1</sup>  
<sup>1</sup>WPI-NanoLSI, Kanazawa Univ., <sup>2</sup>Grad. Sch. Math. & Phys., Kanazawa Univ.
- \*26P-246** **Live-cell imaging defines a threshold in CDK activity at the G2/M transition**  
 Hironori Sugiyama<sup>1</sup>, Yuhei Goto<sup>1,2,3</sup>, Yohei Kondo<sup>1,2,3</sup>, Damien Coudreuse<sup>4</sup>, Kazuhiro Aoki<sup>1,2,3,5</sup>  
<sup>1</sup>The Exploratory Research Center on Life and Living Systems, <sup>2</sup>National Institute for Basic Biology, <sup>3</sup>The Graduate University for Advanced Studies, <sup>4</sup>Centre national de la recherche scientifique, <sup>5</sup>Kyoto University
- \*26P-247** **Elucidation of various IL-1 $\alpha$ / $\beta$  release control mechanisms in cellular inflammatory responses by live-cell imaging of secretion activity.**  
 Yu Peng<sup>2</sup>, Zhuohao Yang<sup>1</sup>, Masahiro Nagata<sup>3</sup>  
<sup>1</sup>Laboratory of Bio-Analytical Chemistry Graduate School of Pharmaceutical Sciences, The University of Tokyo, <sup>2</sup>Laboratory for Nanobiology, Institute for Protein Research, Osaka University, <sup>3</sup>University of Cologne • Institute for Genetics
- \*26P-248** **Cryogenic X-ray Ptychographic Imaging of Cltured Cells toward Visualization of Hierarchical Structures of Chromatin**  
 Yuta Kinami<sup>1,2</sup>, Kurumi Nishimagi<sup>1</sup>, Kosei Harada<sup>2,3</sup>, Masayoshi Nakasako<sup>2,3</sup>, Yukako Oma<sup>1</sup>, Masahiko Harata<sup>1,4</sup>, Yuki Takayama<sup>1,2,4</sup>  
<sup>1</sup>Graduate School of Agricultural Science, Tohoku University, Sendai, Japan, <sup>2</sup>RIKEN SPring-8 Center, Hyogo, Japan, <sup>3</sup>Faculty of Science and Technology, Keio University, Hiyoshi, Japan, <sup>4</sup>International Center for Synchrotron Radiation Innovation Smart, Tohoku University, Sendai, Japan
- \*26P-249** **X-ray diffraction imaging tomography at cryogenic temperature is powerful to reveal 3D structures of biological specimens**  
 Kosei Harada<sup>1,2</sup>, Yuki Takayama<sup>2,3,4</sup>, Masayoshi Nakasako<sup>1,2</sup>  
<sup>1</sup>Faculty of Science and Technology, Keio University, Yokohama, Japan, <sup>2</sup>RIKEN SPring-8 Center, Hyogo, Japan, <sup>3</sup>Graduate School of Agricultural Science, Tohoku University, Sendai, Japan, <sup>4</sup>International Center for Synchrotron Radiation Innovation Smart, Tohoku University, Sendai, Japan

## Poster Sessions

---

---

- \*26P-250**     **Development of nano-endoscopic high-speed atomic force microscopy**  
Hikaru Ichida<sup>1</sup>, Kenichi Umeda<sup>2</sup>, Mohammad Shahidul Alam<sup>1</sup>, Risa Omura<sup>2</sup>, Kudo Makiko<sup>2</sup>, Takehiko Ichikawa<sup>2</sup>, Takeshi Fukuma<sup>2</sup>, Takahiro Nakayama<sup>2</sup>, Mikihiro Shibata<sup>2,3</sup>, Noriyuki Kodera<sup>2</sup>  
<sup>1</sup>Grad. Sch. NanoLS., Kanazawa Univ., <sup>2</sup>WPI-NanoLSI, Kanazawa Univ., <sup>3</sup>InFiniti, Kanazawa Univ.
- 26P-251**     **CTCF-mediated Chromatin Looping is Coupled to the Formation of Phase-separated Transcriptional Condensate**  
Ryanguen Lee<sup>1</sup>, Moo-Koo Kang<sup>2</sup>, Yong-Jin Kim<sup>2</sup>, Bobae Yang<sup>2</sup>, Hwanyong Shim<sup>1</sup>  
<sup>1</sup>Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), <sup>2</sup>Department of Environmental Medical Biology, Institute of Tropical Medicine, Yonsei University College of Medicine
- 26P-252**     **Mechanical properties of hiPSC derived-cardiomyocytes: investigating beating and non-beating cell's nucleus via Nanoendoscopy-AFM**  
Alexis S. Borowiak<sup>1</sup>, T. Ichikawa<sup>1</sup>, M. Ito<sup>2</sup>, T. Shimi<sup>1</sup>, Y. Kono<sup>1</sup>, R. Nitta<sup>3</sup>, T. Fukuma<sup>1</sup>  
<sup>1</sup>Nano Life Science Institute, Kanazawa University, Kakuma-machi, Kanazawa 920-1192, Japan, <sup>2</sup>Department of Cardiovascular Medicine, Graduate School of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo 113-0033, Japan., <sup>3</sup>Division of Structural Medicine and Anatomy, Department of Physiology and Cell Biology, Kobe University Graduate School of Medicine, Kobe, Hyogo 650-0017, Japan.
- 26P-253**     **New mode of intercellular communication: direct vesicle delivery to neighboring cells**  
Tomohiro Minakawa<sup>1</sup>, Fumiyoshi Ishidate<sup>2</sup>, Takahiro K. Fujiwara<sup>2</sup>, Jun K. Yamashita<sup>1</sup>  
<sup>1</sup>Department of Cellular and Tissue Communication, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan, <sup>2</sup>iCeMS Analysis Center, Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University Institute for Advanced Study, Kyoto University, Kyoto, Japan
- 26P-254**     **Photonic chips: a versatile platform for super-resolution microscopy**  
Jean-Claude Tinguely, Vishesh Dubey, Luis Enrique Villegas-Hernandéz, Krishna Agarwal, Balpreet Singh Ahluwalia  
UiT The Arctic University of Norway

**Wednesday, June 26****Bioengineering**

- \*26P-255** **Direct and continuous monitoring of multi-component antibiotic gentamicin in blood**  
Chen Chen<sup>1,2</sup>, Changjian Zhao<sup>1,2</sup>, Yu Wang<sup>1,2</sup>, Jia Geng<sup>1,2</sup>  
<sup>1</sup>Department of Laboratory Medicine, State Key Laboratory of Biotherapy and Cancer Center, West China Hospital, Sichuan University and Collaborative Innovation Center, Chengdu 610041 China., <sup>2</sup>Tianfu Jincheng Laboratory, City of Future Medicine, Chengdu 610500, China.
- \*26P-256** **Microalgae- and Cyanobacteria-Mediated Fabrication of Functionalized Gold Nanoparticles for Photothermal Applications**  
Reham Samir Hamida<sup>1</sup>, Shingo Sotoma<sup>2</sup>, Madoka Suzuki<sup>1</sup>, Yoshie Harada<sup>1,3,4</sup>  
<sup>1</sup>Institute for Protein Research, Osaka University, Osaka, Japan, <sup>2</sup>Faculty of Molecular Chemistry and Engineering, Kyoto Institute of Technology, Kyoto, Japan, <sup>3</sup>Center for Quantum Information and Quantum Biology, Osaka University, Osaka, Japan, <sup>4</sup>Premium Research Institute for Human Metaverse Medicine (WPI-PRIME), Osaka University, Osaka, Japan
- \*26P-257** **Iono-chromic control of G-protein Ras by fused with M13 peptide**  
Zhang Ziyun, Sabek Yassine, Nobuyuki Nishibe, Shinsaku Maruta  
 Department of Biosciences, Graduate School of Science and Engineering Soka University, Hachioji, Tokyo JAPAN
- \*26P-258** **Redox-Active Liquid-Liquid Phase Separation Materials Promote Oxidative Protein Folding**  
Yukino Yamashita<sup>1</sup>, Munehiro Kumashiro<sup>2</sup>, Tomohide Saio<sup>2</sup>, Takahiro Muraoka<sup>1,3</sup>  
<sup>1</sup>Department of Applied Chemistry, Graduate School of Engineering, Tokyo University of Agriculture and Technology, <sup>2</sup>Division of Molecular Life Science, Institute of Advanced Medical Sciences, Tokushima University, <sup>3</sup>Kanagawa Institute of Industrial Science and Technology (KISTEC)

## Poster Sessions

---

---

**26P-259**

**SeeDB-Live: minimally invasive optical clearing media for fluorescence imaging of live tissue ex vivo and in vivo**

Shigenori Inagaki<sup>1</sup>, Nao Tamagawa<sup>2</sup>, Yuki Kambe<sup>2</sup>, Rei Yagasaki<sup>3</sup>, Aki Teranishi<sup>3</sup>, Misato Miyagawa<sup>3</sup>, Hikari Takeshima<sup>1</sup>, Shunki Tamura<sup>1</sup>, Satoshi Fujimoto<sup>1</sup>, Yuki Naito<sup>1,4</sup>, Keisuke Ito<sup>5</sup>, Hideki Enomoto<sup>5</sup>, Katsuhiko Hayashi<sup>1,4</sup>, Takashi Sato<sup>6</sup>, Yoshiaki Tagawa<sup>2</sup>, Satoru Okuda<sup>3</sup>, Tatsuo Sato<sup>2</sup>, Takeshi Imai<sup>1</sup>

<sup>1</sup>Kyushu University, <sup>2</sup>Kagoshima University, <sup>3</sup>Kanazawa University, <sup>4</sup>Osaka University, <sup>5</sup>Kobe University, <sup>6</sup>Medical University of South Carolina

### Crystal growth & Crystallization technique

**\*26P-260**

**Emergence of order from proteins under nucleation**

Dimitrios Triantafyllidis<sup>1</sup>, Suraksha Smitha<sup>1</sup>, Felix Lehmkuhler<sup>2</sup>, Arwen R. Pearson<sup>1</sup>

<sup>1</sup>Hamburg Centre for Ultrafast Imaging, Institute for Nanostructure and Solid State Physics, Universität Hamburg, Luruper Chaussee 149, 22761 Hamburg, Germany, <sup>2</sup>Deutsches Elektronen-Synchrotron DESY, Notkestraße 85, 22607 Hamburg, Germany

### Virus structure, function, SARS-CoV-2

**\*26P-261**

**Complementation of Influenza A virus genome segments by cellular coinfection**

Yuu Kawahara, Hiroyuki Noji, Kazuhito Tabata

Department of Applied Chemistry, School of Engineering, University of Tokyo

**\*26P-262**

**Observation of the compaction process ribonucleoprotein complex formed by SARS-CoV-2 genome RNA and N protein by using fluorescence correlation spectroscopy.**

Takuya Katayama<sup>1,2</sup>, Yuji Itoh<sup>1,2,3</sup>, Naoya Kaneda<sup>1,3</sup>, Satoshi Takahashi<sup>1,2,3</sup>

<sup>1</sup>IMRAM, Tohoku Univ., <sup>2</sup>Grad. Sch. Life Sci., Tohoku Univ., <sup>3</sup>Grad. Sch. Sci., Tohoku Univ.

**Wednesday, June 26****26P-263****Pseudo-luciferase activity of the SARS-CoV-2 spike protein**

Ryo Nishihara<sup>1,2</sup>, Hisham M Dokainish<sup>3,4</sup>, Yoshiki Kihara<sup>1,5</sup>, Yuji Sugita<sup>4,6,7</sup>, Ryoji Kurita<sup>1,5</sup>

<sup>1</sup>Health and Medical Research Institute, National Institute of Advanced Industrial Science and Technology, <sup>2</sup>Japan Science and Technology Agency, PRESTO, <sup>3</sup>Faculty of Pharmaceutical Sciences, Hokkaido University, <sup>4</sup>Theoretical Molecular Science Laboratory, RIKEN Cluster for Pioneering Research, <sup>5</sup>Faculty of Pure and Applied Sciences, University of Tsukuba, <sup>6</sup>Laboratory for Biomolecular Function Simulation, RIKEN Center for Biosystems Dynamics Research, <sup>7</sup>Computational Biophysics Research Team, RIKEN Center for Computational Science

**Mechanosensing and Mechanobiology, Biological Temperature****\*26P-264****Tracking of adipogenesis process of mesenchymal stem cells cultured in the spherical microwells**

You-Hsuan Liu<sup>1</sup>, Karen G. Rosal<sup>1</sup>, Chon-In Cheong<sup>2</sup>, Feng-Chiao Tsai<sup>3</sup>, Keng-Hui Lin<sup>1</sup>

<sup>1</sup>Institute of Physics, Academia Sinica, Taipei, Taiwan, <sup>2</sup>Genenet Technology Limited, Stevenage, UK, <sup>3</sup>Department and Graduate Institute of Pharmacology, National Taiwan University, Taipei, Taiwan

**\*26P-265****Phenotypic Heterogeneity and Cell Orientation in Extracellular Matrix Production of Escherichia coli**

Fumiaki Yokoyama, Kazumasa Takeuchi

Department of Physics, The University of Tokyo, Tokyo, Japan

**26P-266****“DIY Statistical Mechanics” to understand the concepts of Boltzmann distribution and local temperature**

Kiyoshi Ohnuma<sup>1</sup>, Masayo Inoue<sup>2</sup>, Noritaka Masaki<sup>3</sup>, Masako Ohtaki<sup>4</sup>, Taro Toyota<sup>5</sup>

<sup>1</sup>Nagaoka University of Technology, <sup>2</sup>Kyushu Institute of Technology, <sup>3</sup>National Institute of Genetics, <sup>4</sup>WASEDA University, <sup>5</sup>The University of Tokyo

**Biophysics of disease****\*26P-267****Tissue Repair in Colorectal Cancer Organoids**

Jimmy Van Hear<sup>1</sup>, Yanlan Mao<sup>1</sup>, Chris Tape<sup>2</sup>

<sup>1</sup>Laboratory for Molecular Cell Biology, University College London, <sup>2</sup>UCL Cancer Institute, University College London

# Poster Sessions

---

---

**\*26P-268 Clustering of Progerin Induces Nuclear Deformation By Disrupting Heterochromatin Organization**

YigJi Lee, Won-Ki Cho

Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon, 34141, Republic of Korea

**26P-269 Fibrinogen-erythrocyte binding and erythrocyte-erythrocyte adhesion as determinants for cardiovascular risk**

Catarina Lopes<sup>1</sup>, Ryan Gouveia e Melo<sup>2</sup>, Luís Mendes Pedro<sup>2</sup>,  
Filomena Carvalho<sup>1</sup>, Nuno C. Santos<sup>1</sup>

<sup>1</sup>Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, Lisbon, Portugal, <sup>2</sup>Hospital de Santa Maria, Centro Hospitalar Universitário Lisboa Norte, Lisbon, Portugal

## Miscellaneous topics

**\*26P-270 Immobilization of Liposomes within Porous Aluminum Oxide and Intact Release: Basic Study and Applications to Single Particle Analysis for Exosomes**

Masahiro Okada<sup>1</sup>, Yusuke Sato<sup>1</sup>, Tetsuji Itoh<sup>2</sup>, Seiichi Nishizawa<sup>1</sup>

<sup>1</sup>Graduate School of Science, Tohoku University, <sup>2</sup>AIST Tohoku

**\*26P-271 Enhancing Tomato Shelf Life through Nanoparticle-Based Preservation Techniques**

Kummari Swathi<sup>1,2</sup>, CH.Shanthi Devi<sup>3,4</sup>

<sup>1</sup>Research Scholar, Andhra University, Visakhapatnam, <sup>2</sup>Assistant Professor, St. Francis College for Women, Hyderabad, <sup>3</sup>Research Guide Andhra University, Visakhapatnam, <sup>4</sup>Assistant Professor, Vishaka Degree College, Visakhapatnam

**26P-272 NOVEL ANTIBACTERIAL AGENTS IN TREATING MULTIDRUG RESISTANT BACTERIA CAUSING WOUND INFECTIONS IN DIABETIC PATIENTS**

Shailaja Raj Marla<sup>2</sup>, Mithali Raj Marla<sup>1</sup>, Maria Shajan<sup>2</sup>

<sup>1</sup>Kamineni institute of medical Sciences, <sup>2</sup>St. Francis College For Women

## Thursday, June 27

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

- \*27P-001**    **Structural Basis for the Functional Diversity in Mechanosensitive Channel OSCAs**  
Kio Horinaka, Tatsuya Hagino, Tsukasa Kusakizako, Osamu Nureki  
Department of Biological Sciences, Graduate School of Science, The University of Tokyo, Tokyo, Japan
- \*27P-002**    **Development of an Oxidative Folding Promoter by Controlling Protein Recognition Properties**  
Koki Suzuki<sup>1</sup>, Ryoya Nojiri<sup>1</sup>, Tomohide Saio<sup>2</sup>, Takahiro Muraoka<sup>1,3</sup>  
<sup>1</sup>School of Engineering, Tokyo University of Agriculture and Technology, <sup>2</sup>Institute of Medical Sciences, Tokushima University, <sup>3</sup>Kanagawa Institute of Industrial Science Technology
- \*27P-003**    **How well do Alphafold2 structures perform in Molecular Docking?**  
Ben Hanks, John Douglas Tanner, Ben Corry  
Australian National UNiversity
- \*27P-004**    **Cryo-EM Structure Analysis of hOCT2, Organic Cation Transporter 2**  
Haruna Inuzuka, Yongchan Lee, Tomohiro Nishizawa  
Yokohama City University

## Poster Sessions

---

- \*27P-005**     **Magnetic field effects on structure of iron sulfur protein studied by EPR and SAXS**  
Shogo Soga<sup>1</sup>, Ryoma Kobayashi<sup>2</sup>, Hirokazu Masai<sup>3</sup>, Shinji Kohara<sup>4</sup>, Kiminori Maeda<sup>1</sup>, Mitsuhiro Hirai<sup>5</sup>, Hiroki Nagashima<sup>1,2</sup>, Shigeki Arai<sup>2</sup>  
<sup>1</sup>Graduate School of Science and Engineering, Saitama University, Saitama, Japan, <sup>2</sup>Institute for Quantum Science and Technology, National institutes for Quantum Science and Technology, Chiba, Japan, <sup>3</sup>National Institute of Advanced Industrial Science and Technology, Osaka, Japan, <sup>4</sup>National Institute for Materials Science, Ibaraki, Japan, <sup>5</sup>Graduate School of Science and Technology, Gunma University, Gunma, Japan
- \*27P-006**     **Analysis of the aggregation characteristics of tau droplets under oxidizing and reducing conditions**  
Yuki Michiue<sup>1</sup>, Ayumi Masui<sup>1</sup>, Keisuke Yuzu<sup>1</sup>, Yumiko Ohhashi<sup>1,2</sup>, Keiichi Yamaguchi<sup>3</sup>, Yasushi Kawata<sup>4</sup>, Eri Chatani<sup>1</sup>  
<sup>1</sup>Grad. Sch. Sci., Kobe Univ, <sup>2</sup>CBC, Tokyo Tech, <sup>3</sup>Grad. Sch. Eng., Osaka Univ, <sup>4</sup>Grad. Sch. Eng., Tottori Univ
- \*27P-007**     **Determination of the hemocyanin structure from Concholepas concholepas using an X ray crystallography and Cryo EM combined approach**  
Sebastian Manuel Muñoz<sup>1</sup>, Michelle Salazar<sup>2</sup>, Gabriel Vallejos<sup>1</sup>, Augusto Manubens<sup>2,3</sup>, Mathias Ellena<sup>4</sup>, José Edwin Quesñay<sup>4</sup>, Andre Ambrosio<sup>4</sup>, Maria Inés Becker<sup>2,3</sup>, Victor Castro-Fernandez<sup>1</sup>, Victoria Guixé<sup>1</sup>  
<sup>1</sup>Laboratorio de Bioquímica y Biología Molecular, Facultad de Ciencias, Universidad de Chile. Santiago, Chile., <sup>2</sup>Fundación Ciencia y Tecnología para el Desarrollo (FUCITED). Santiago, Chile., <sup>3</sup>Laboratorio Investigación y Desarrollo, Biosonda S.A. Santiago, Chile., <sup>4</sup>Instituto de Física de São Carlos, Universidade de São Paulo. São Paulo, Brasil.
- \*27P-008**     **Designing Self-assembling Protein Nanoparticle using computational method**  
JinWoong Song<sup>1</sup>, SeaHae Choi<sup>2</sup>, Junsu Ko<sup>3</sup>, Won-Kyu Lee<sup>2</sup>, Juyong Lee<sup>1,3,4</sup>  
<sup>1</sup>College of Pharmacy, Seoul National University, Seoul, Republic of Korea, <sup>2</sup>New Drug Development Center, Osong Medical Innovation Foundation (Kbiohealth), Cheongju, Republic of Korea, <sup>3</sup>Arontier Co., Seoul, Republic of Korea, <sup>4</sup>Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology, Seoul, Republic of Korea



**Thursday, June 27**

- \*27P-009**     **Structure-based discovery of dual pathway inhibitors for SARS-CoV-2 entry**  
Haofeng Wang  
ShanghaiTech University
- 27P-010**     **Efficient design of allosteric activators for Rsp5 E3 ligase using machine-learning tool ProteinMPNN**  
Wei-Lin Lu  
Institute of Biological Chemistry, Academia Sinica
- 27P-011**     **Structural analysis of dissimilatory sulfate reductase**  
Rio Hamada, Koji Nishikawa, [Hideaki Ogata](#)  
University of Hyogo
- 27P-012**     **Structure analysis of Panx3**  
[Ryuga Teramura](#), Taiichi Tsuyama, Ken Yokoyama  
Kyoto Sangyo University
- 27P-013**     **Approach to in situ structural analysis using JEOL's Cryo-FIB-SEM and CRYO ARM**  
[Tomoko Miyata](#)<sup>1,2</sup>, Miki Kinoshita<sup>1,2</sup>, Fumiaki Makino<sup>1,2,3</sup>, Yoshie Kushima<sup>1,2</sup>, Reiko Yamauchi<sup>1,2</sup>, Keiichi Namba<sup>1,2</sup>  
<sup>1</sup>Graduate School of Frontier Biosciences, Osaka University, <sup>2</sup>JEOL YOKOGUSHI Research Alliance Laboratories, Osaka University, <sup>3</sup>JEOL Ltd
- 27P-014**     **Cryo-EM structure of full-length cargo receptor ERGIC-53 in complex with MCFD2**  
[Satoshi Watanabe](#)<sup>1</sup>, Yoshiaki Kise<sup>2</sup>, Kento Yonezawa<sup>3</sup>, Mariko Inoue<sup>1</sup>, Nobutaka Shimizu<sup>3</sup>, Osamu Nureki<sup>2</sup>, Kenji Inaba<sup>1,4</sup>  
<sup>1</sup>Tohoku University, <sup>2</sup>The University of Tokyo, <sup>3</sup>KEK, IMSS, PF, <sup>4</sup>Kyushu University

**Protein: Structure & Function**

- \*27P-015**     **Investigation of structural dynamics of E6AP/E6/p53 complex by using HS-AFM and computational simulation**  
[Yamamoto Sohma](#)<sup>1</sup>, Kazusa Takeda<sup>2</sup>, Holger Flechsig<sup>3</sup>, Hiroki Konno<sup>3</sup>  
<sup>1</sup>College of Science and Engineering, School of Biological Science and Technology, Kanazawa University, Kakuma-machi, Kanazawa 920-1192, Japan, <sup>2</sup>Graduate School of Natural Science and Technology, Kanazawa University, Kanazawa 920-1192, Japan, <sup>3</sup>WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kakuma-machi, Kanazawa 920-1192, Japan

## Poster Sessions

---

**\*27P-016**      **Structural Basis of How MGME1 Processes DNA 5' Ends to Maintain Mitochondrial Genome Integrity**

Eric Yin-Chen Mao<sup>1</sup>, Chyuan-Chuan Wu<sup>2</sup>

<sup>1</sup>Department of Chemistry, College of Science, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Biochemistry and Molecular Biology, College of Medicine, National Cheng Kung University, Tainan, Taiwan

**\*27P-017**      **Unveiling dynamics of Adenosine A2a receptor coupled to G proteins**

Sari Hagimoto, Duy Tran, Akio Kitao

Tokyo Institute of Technology

**\*27P-018**      **Structural basis for recruitment of peptidoglycan endopeptidase MepS by lipoprotein Nlpl**

Shen Wang

Institute of Biochemistry and Molecular Biology, College of Medicine, National Taiwan University, Taipei, Taiwan.

**\*27P-019**      **Structural and functional analysis of PPL, a lectin from the poisonous mushroom *Pleurocybella porrigens***

Daisuke Adachi

Graduate School of Medical Life Science, Yokohama City University, 1-7-29 Suehiro, Tsurumi-ku Yokohama, 230-0045, Kanagawa, Japan

**\*27P-020**      **ERK1 is a noble topological factor to relax DNA supercoiling**

Sangmin Ju<sup>1</sup>, Jaehyeon Jeong<sup>2</sup>, Soo Jin Lee<sup>3</sup>, Sanzhar Tarassov<sup>4</sup>, Jeong Ho Jang<sup>3</sup>, Heeyoun Bunch<sup>1,2</sup>

<sup>1</sup>School of Applied Biosciences, College of Agriculture & Life Sciences, Kyungpook National University, Daegu, Republic of Korea, <sup>2</sup>Department of Applied Biosciences, Kyungpook National University, Daegu, Republic of Korea, <sup>3</sup>Department of Biology Education, Kyungpook National University, Daegu, Republic of Korea, <sup>4</sup>Department of Biofabrication, Kyungpook National University, Daegu, Republic of Korea

**\*27P-021**      **Reconstruction and Analysis of the Ancestral ATPase**

Aya Suzuki<sup>1</sup>, Ryutaro Furukawa<sup>1</sup>, Meghna Sobti<sup>2,3</sup>, Hiroshi Ueno<sup>1</sup>, Alastair G. Stewart<sup>2,3</sup>, Satoshi Akanuma<sup>4</sup>, Hiroyuki Noji<sup>1</sup>

<sup>1</sup>Applied Chemistry, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Molecular, Structural and Computational Biology Division, The Victor Chang Cardiac Research Institute, NSW, Australia, <sup>3</sup>St Vincent's Clinical School, Faculty of Medicine, UNSW Sydney, NSW, Australia, <sup>4</sup>Faculty of Human Sciences, Waseda University, Saitama, Japan

## Thursday, June 27

- \*27P-022** **In situ structural analysis of Salmonella T3SS within the SCV**  
Taiga Horii<sup>1,2</sup>, Hiroko Takazaki<sup>2</sup>, Yukihisa Hayashida<sup>3</sup>, Yusuke V. Morimoto<sup>4</sup>, Takayuki Kato<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. Frontier Biosci., Osaka Univ., Japan, <sup>2</sup>IPR, Osaka Univ., Japan, <sup>3</sup>Grad. Sch. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Japan, <sup>4</sup>Dept. Phys. and Info. Eng., Fac. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Japan
- \*27P-023** **Structural basis of bifunctionality of mimosine synthase in plants**  
Sayaka Tsuji<sup>1</sup>, Shigeki Ogai<sup>2</sup>, Masakazu Fukuta<sup>2</sup>, Hirosuke Oku<sup>2</sup>, Hiroshi Sugimoto<sup>3</sup>, Masaki Horitani<sup>1,4</sup>  
<sup>1</sup>The United Graduate School of Agricultural Sciences, Kagoshima University, <sup>2</sup>Tropical Biosphere Research Center University of the Ryukyus, <sup>3</sup>RIKEN, <sup>4</sup>Faculty of Agriculture, Saga university
- \*27P-024** **Revealing KcsA dynamics by single-particle analysis and molecular dynamics**  
Kotaku Yano<sup>1</sup>, Hiroko Takazaki<sup>2</sup>, Takuo Yasunaga<sup>1</sup>  
<sup>1</sup>Graduate School of Computer Science and Systems Engineering, Kyushu Institute of Technology, Fukuoka, Japan, <sup>2</sup>IPR, Osaka University
- \*27P-025** **Molecular Mechanisms of Diverse Chemokine Recognition and Downstream Signaling Selectivity of Chemokine Receptors**  
Fumiya K. Sano<sup>1</sup>, Shirsha Saha<sup>2</sup>, Sharma Saloni<sup>2</sup>, Ramanuj Banerjee<sup>2</sup>, Yoshiaki Kise<sup>1</sup>, Wataru Shihoya<sup>1</sup>, Osamu Nureki<sup>1</sup>, Arun Shukla<sup>2</sup>  
<sup>1</sup>Grad. Sch. of Sci., The Univ. of Tokyo, <sup>2</sup>Dept. of Bio. Sci., Indian Inst. of Tech.
- \*27P-027** **Deciphering Substrate Selectivity in SWEET Transporters: A Molecular Dynamics Perspective**  
Aditi Laddha<sup>1</sup>, Ramasubbu Sankararamakrishnan<sup>1,2</sup>  
<sup>1</sup>Department of Biological Sciences and Bioengineering, Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh, India, <sup>2</sup>Mehta Family Centre for Engineering in Medicine, Indian Institute of Technology Kanpur, Kanpur, India
- \*27P-028** **Elucidation of Characteristic Cold-Adaptation Mechanism of Pyruvate Kinase from Psychrophilic Bacteria by X-ray Crystallography**  
Hansani Ekanayake<sup>1</sup>, Hiroshi Sugimoto<sup>2</sup>, Masaki Horitani<sup>3</sup>  
<sup>1</sup>The United Graduate School of Agricultural Sciences, Kagoshima University, Japan, <sup>2</sup>RIKEN RSC, Japan, <sup>3</sup>Faculty of Agriculture, Saga University, Japan

# Poster Sessions

---

- 27P-029**      **Different Dimerization Behavior of Fluorescent Proteins, eGFP and eYFP**  
Yuna Kinoshita, Haruko Hosoi  
Toho University
- 27P-030**      **Role of actin-binding loops in determining myosin velocity**  
Hideki Furusawa, Takeshi Haraguchi, Kohji Ito  
Department of Biology, Graduate School of Science, Chiba University, Chiba 263-8522, Japan
- 27P-031**      **Investigated the Amino Acid Region That Enables the fastest Movement in the Fastest Myosin**  
Runa Komoto, Suzune Kato, Kohei Yosimura, Takeshi Haraguchi, Kohji Ito  
Department of Biology, Graduate School of Science, Chiba University, Chiba 263-8522, Japan
- 27P-032**      **Real-Time, Site-Specific Observation of Chaperone-Mediated Protein Folding using Noncanonical Amino Acid Labeling**  
Munehiro Kumashiro<sup>1</sup>, Adarshi Welegedara<sup>2</sup>, Haocheng Qianzhu<sup>2</sup>, Elwy Abdelkader<sup>2</sup>, Thomas Huber<sup>2</sup>, Gottfried Otting<sup>2</sup>, Tomohide Saio<sup>1</sup>  
<sup>1</sup>Institute of Advanced Medical Sciences, Tokushima University, Tokushima, Japan, <sup>2</sup>Research School of Chemistry, Australian National University, Canberra, Australia
- 27P-033**      **Search for specific regions of myosin responsible for moving actin through chiral curves**  
Yoshiki Takayama, Kohei Yoshimura, Taisei Nagai, Takuma Imi, Takeshi Haraguchi, Kohji Ito  
Department of Biology, Graduate School of Science, Chiba University, Chiba 263-8522, Japan
- 27P-034**      **Reaction Pathways in DNA Hydrolysis of EcoRV Calculated by QM/MM Metadynamics**  
Itaru Onishi<sup>1</sup>, Mika Mitsumatsu<sup>1</sup>, Hiroki Sato<sup>1</sup>, Ryoutarou Matsuda<sup>1</sup>, Norio Yoshida<sup>2</sup>, Fumio Hirata<sup>3</sup>, Masayuki Irisa<sup>1</sup>  
<sup>1</sup>Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Japan, <sup>2</sup>Grad. Sch. Inform., Nagoya Univ., Japan, <sup>3</sup>Inst. Mol. Sci., Japan

**Thursday, June 27****27P-035 Elucidating the Mechanism Underlying Atypical UBA7-UBE2L6 Disulfide Complex Formation**Pei-Tzu Chen<sup>1</sup>, Kuen-Phon Wu<sup>1,2</sup><sup>1</sup>Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan, <sup>2</sup>Institute of Biochemical Sciences, College of Life Science, National Taiwan University, Taipei, Taiwan**27P-036 Molecular mechanisms for smooth rotation of the flagellar rod within the LP ring**Akio Kitao<sup>1</sup>, Tomoko Yamaguchi<sup>2,3</sup>, Fumiaki Makino<sup>2,4,5</sup>, Tomoko Miyata<sup>2,5</sup>, Tohru Minamino<sup>2</sup>, Takayuki Kato<sup>6</sup>, Keiichi Namba<sup>2,5</sup><sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, <sup>2</sup>Graduate School of Frontier Biosciences, Osaka University, <sup>3</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, <sup>4</sup>JOEL Ltd., <sup>5</sup>JEOL YOKOGUSHI Research Alliance Laboratories, Osaka University, <sup>6</sup>Institute for Protein Research, Osaka University**Protein: Physical property****\*27P-037 Human antimicrobial peptide LL-37 possesses unique multimerization properties compared to its orthologs in mouse and rat**Mitsuki Shibagaki, Jeremia Chrisnanto, Dessalegn Tefera, Kotaro Tsukioka, Waka Ueda, Kohei Kano, Hao Gu, Fumi Hirai, Yasuhiro Kumaki, Hiroyuki Kumeta, Tomoyasu Aizawa

Graduate School of Life Science, Hokkaido University, Sapporo, Hokkaido, Japan

**\*27P-038 A Nanotech methodology of Liquid-liquid phase separated droplet regulation with Butterfly-shaped Gold Nanomaterials**Tomohiro Nobeyama<sup>1</sup>, Koji Takata<sup>2</sup>, Megumi Mori<sup>3</sup>, Yoichi Yamada<sup>1</sup>, Tatsuya Murakami<sup>2</sup>, Kentaro Shiraki<sup>1</sup><sup>1</sup>Faculty of Pure and Applied Sciences, University of Tsukuba, Tsukuba, Japan, <sup>2</sup>Graduate School of Engineering, Toyama Prefectural University, Toyama, Japan, <sup>3</sup>Faculty of Agriculture, Kyoto University, Kyoto, Japan**\*27P-039 Nonionic Amino acid Interactions Evaluated Through Solubility**Akira Nomoto<sup>1,2</sup>, Shunsuke Tomita<sup>2</sup>, Kentaro Shiraki<sup>1</sup><sup>1</sup>Institute of Pure and Applied Sciences, University of Tsukuba, <sup>2</sup>Health and Medical Research Institute, National Institute of Advanced Industrial Science and Technology

## Poster Sessions

---

---

- \*27P-040** Fly-Casting-Like Capture and Translocation of KIF1A by C-Terminal Tail of Tubulin  
Koki Adachi, Mitsunori Takano  
Dept. Pure & Appl. Phys., Grad. Sci. Adv. Sci. & Eng., Waseda Univ., Tokyo, Japan
- \*27P-041**  $\alpha$ B-crystallin prevents aging of  $\alpha$ -synuclein droplets  
Kenji Fujitsuka<sup>1</sup>, Keisuke Yuzu<sup>1</sup>, Yuki Michiue<sup>1</sup>, John A. Carver<sup>2</sup>, Eri Chatani<sup>1</sup>  
<sup>1</sup>Graduate School of Science, Kobe University, Kobe, Japan, <sup>2</sup>Research School of Chemistry, Australian National University, Canberra, Australia
- 27P-042** Differences in microstructural changes during tensile deformation between hair shapes  
Hironori Kimura, Kota Yamamoto, Kazuyuki Suzuta  
Milbon Co., Ltd

### Protein: Function

- \*27P-043** Development of Cell-free Screening Method for Terminal deoxynucleotidyl transferase for Enzymatic DNA synthesis  
Takashi Ohmizu, Hiroshi Ueno, Hiroyuki Noji  
University of Tokyo
- \*27P-044** Analysis of the physiological significance of dual-localization of Hfd1 in yeast  
Yuta Konishi<sup>1</sup>, Haruka Sakaue<sup>2</sup>, Hironori Takeda<sup>3</sup>, Toshiya Endo<sup>2</sup>  
<sup>1</sup>Kyoto Sangyo Univ., Division of Life Science, <sup>2</sup>Kyoto Sangyo Univ., Faculty of Life Science, <sup>3</sup>Kobe University, Engineering Biology Research Center
- \*27P-045** Identification of multiple responsible genes for abnormal cold acclimation of *C. elegans* lectin mutants  
Moe Tezuka<sup>1</sup>, Misaki Okahata<sup>1</sup>, Akane Ohta<sup>1,2</sup>, Atsushi Kuhara<sup>1,2</sup>  
<sup>1</sup>Faculty of Science and Engineering Konan University & Institute for Integrative Neurobiology, Kobe, Japan, <sup>2</sup>PRIME, AMED
- 27P-046** Reconstitution of ER glutathione transport system  
Ryuta Sakamoto<sup>1</sup>, Chika Tsutsumi<sup>1</sup>, Ryosuke Tahara<sup>1</sup>, Kazuhiro Nagata<sup>3</sup>, Ryo Ushioda<sup>1,2</sup>  
<sup>1</sup>Laboratory of Molecular and Cellular Biology, Faculty of Life Sciences, Kyoto Sangyo University, <sup>2</sup>Institute for Protein Dynamics, Kyoto Sangyo University, <sup>3</sup>JT Biohistory Research Hall

# Thursday, June 27

## 27P-047 Investigating the catalytic mechanism of Sars-CoV-2 MPro

Stephan Kleine-Doepke, Pedram Mehrabi, Caitlin Hatton  
Universität Hamburg, Germany

### Protein: Measurement & Analysis

## \*27P-048 Supramolecular chirality in DFNKF amyloid fibrils derived from human calcitonin by VCD

Shinryu Isa<sup>1</sup>, Toki Fujino<sup>1</sup>, Raja Prema<sup>1</sup>, Daisuke Sato<sup>1</sup>, Akira Naito<sup>1</sup>, Hisako Sato<sup>2</sup>, Izuru Kawamura<sup>1</sup>

<sup>1</sup>Yokohama National University, Yokohama, Japan, <sup>2</sup>Ehime University, Matsuyama, Japan

## \*27P-049 Measurement of structural flexibility of enzymes using spin labeling-ESR

Akane Yato<sup>1</sup>, Rio Asaka<sup>2</sup>, Keiichi Watanabe<sup>2</sup>, Masaki Horitani<sup>1,2</sup>

<sup>1</sup>The United Graduate School of Agricultural Sciences, Kagoshima University, <sup>2</sup>Faculty of Agriculture, Saga University

## 27P-050 Muon in Structural Biology: Visualization of proton and electron transfer by the elementary particle “Muon”

Tamiko Kiyotani<sup>1</sup>, Ichiro Tanaka<sup>2</sup>, Masatoshi Hiraishi<sup>2</sup>, Nobuo Niimura<sup>2</sup>

<sup>1</sup>Showa Pharmaceutical University, <sup>2</sup>Ibaraki University

## 27P-051 Optimization of Cryo 3D-CLEM for in situ Structural Analysis

Hiroko Takazaki, Misaki Arie, Taiga Horii, Takayuki Kato

Institute for Protein Research, Osaka University, Osaka, Japan.

## 27P-052 Investigating CRMP2 isoforms multimerization dynamics by High-Speed AFM

Djamel Eddine Chafai, Saho Kitagawa

WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kakuma-machi, Kanazawa 920-1192, Japan

## 27P-053 Designing an alternative protocol to detect the antigen-antibody reaction using EPR and aggregated AuNPs as paramagnetic probes

Luis Celedón Ornelas, Alma Nelly Díaz Herreros,

José Silvestre Figueroa Mendoza, Marco Alonso Arellano Alcántara,

Belén Chávez Ramírez, Stephany Natasha Arellano Ahumada,

Daniel Ramírez Rosales

Instituto Politécnico Nacional

# Poster Sessions

## Protein: Design & Engineering

- \*27P-054** **De novo design of a protein containing one left-handed  $\beta\alpha\beta$ -motif.**  
Naoki Tomita<sup>1</sup>, Hiroto Murata<sup>1</sup>, Hiroki Onoda<sup>2</sup>, Leonard Chavas<sup>1,2</sup>,  
George Chikenji<sup>1</sup>  
<sup>1</sup>Dept. of Appl. Phys., Grad. Sch. of Eng., Nagoya Univ., Aichi, Japan, <sup>2</sup>NUSR,  
Nagoya Univ., Aichi, Japan
- \*27P-055** **Machine-learning-assisted multiple maturation of antibody fragment:  
simultaneous improvement of target-binding, bacterial expression,  
and thermal stability**  
Tomoyuki Ito<sup>1</sup>, Sakiya Kawada<sup>1</sup>, Hikaru Nakazawa<sup>1</sup>, Akikazu Murakami<sup>2,3</sup>,  
Mitsuo Umetsu<sup>1,4</sup>  
<sup>1</sup>Grad. Sch. Eng., Tohoku Univ., Sendai, Japan, <sup>2</sup>Grad. Sch. Biomed. Sci., Tokushima  
Univ., Tokushima, Japan, <sup>3</sup>RePHAGEN Co. Ltd., Okinawa, Japan, <sup>4</sup>AIP, RIKEN,  
Tokyo, Japan
- \*27P-056** **Construction of heptameric de novo peptide nanopore by chimera  
proteinization**  
Ayaka Nakada<sup>1</sup>, Kota Natio<sup>2</sup>, Rina Ogawa<sup>1</sup>, Misa Yamaji<sup>1</sup>,  
Yoshikazu Tanaka<sup>2</sup>, Ryuji Kawano<sup>1</sup>  
<sup>1</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and  
Technology, Tokyo, Japan, <sup>2</sup>Graduate School of Life Sciences, Tohoku University,  
Sendai, Japan
- \*27P-057** **Library design aiming for the development of covalent binding  
antibody mimetics**  
Yuki Tokunaga<sup>1</sup>, Ryo Matsunaga<sup>1</sup>, Kohei Tsumoto<sup>1,2</sup>  
<sup>1</sup>School of Engineering, The University of Tokyo, Japan, <sup>2</sup>The Institute of Medical  
Science, The University of Tokyo, Japan
- \*27P-058** **Miniaturized cyclic peptides derived from CDR-H3 of antibodies  
exhibit binding activities to SARS-CoV-2 RBD**  
Yoshiki Yasuda<sup>1</sup>, Satoru Nagatoishi<sup>2</sup>, Ryo Matsunaga<sup>2</sup>, Daisuke Kuroda<sup>3</sup>,  
Kouhei Tsumoto<sup>1,2,4</sup>  
<sup>1</sup>Department of Chemistry and Biotechnology, school of Engineering, The University of  
Tokyo, Tokyo, Japan, <sup>2</sup>Department of Bioengineering, School of Engineering, The  
University of Tokyo, Tokyo, Japan, <sup>3</sup>Research Center for Drug and Vaccine  
Development, National Institute of Infectious Diseases, Tokyo, Japan, <sup>4</sup>The Institute of  
Medical Science, The University of Tokyo, Tokyo, Japan



## Thursday, June 27

- \*27P-059**    **De novo nanobody binder design by generative AI models**  
Hakyung Lee<sup>1</sup>, Juyong Lee<sup>1,2</sup>  
<sup>1</sup>Department of Molecular Medicine and Biopharmaceutical Sciences, Seoul National University, <sup>2</sup>College of Pharmacy, Seoul National University
- 27P-061**    **Towards further enhancement of the activity of the minimal luciferase picALuc**  
Tadaomi Furuta<sup>1</sup>, Yuki Ohmuro-Matsuyama<sup>2</sup>  
<sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, <sup>2</sup>Technology Research Laboratory, Shimadzu Corporation
- 27P-062**    **Structural analysis unveils the enhanced stability of AI-designed ubiquitin-fold proteins**  
Kuen-Phon Wu, Wei-Lin Lu, Wei-Jen Chuang  
Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan

### Protein: Intrinsic disorder

- \*27P-063**    **Comprehensive Analysis of Intrinsically Disordered Proteins in the Marsupial**  
Shiho Aoki<sup>1</sup>, Wataru Onodera<sup>2</sup>, Toru Asahi<sup>3,4</sup>  
<sup>1</sup>Waseda University, Dept. of Advanced Sci. and Eng., Tokyo, Japan, <sup>2</sup>JSPS Postdoctoral Fellow, PD, Tokyo, Japan, <sup>3</sup>Waseda University, Dept. of Science and Engineering, Tokyo, Japan, <sup>4</sup>Waseda University, Nano-Life, Tokyo, Japan
- \*27P-064**    **Elucidating fusion dynamics of FUS protein droplets using fluorescence microscopy and optical tweezers**  
Syamil Muharror Ahsanul Husna<sup>2,3</sup>, Atsumi Hando<sup>1,2</sup>, Saori Kanbayashi<sup>2</sup>, Satoshi Takahashi<sup>1,2,3</sup>, Kiyoto Kamagata<sup>1,2,3</sup>  
<sup>1</sup>Department of Life Science, Graduate School of Science, Tohoku University, <sup>2</sup>Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, <sup>3</sup>Department of Chemistry, Graduate School of Science, Tohoku University
- \*27P-065**    **Balancing stability, dynamics and kinetics in phase separation of intrinsically disordered proteins**  
Guoqing Zhang, Xiakun Chu  
The Hong Kong University of Science and Technology (Guangzhou)

# Poster Sessions

## **27P-066** Characterization, regulation, and design of protein droplets

Kiyoto Kamagata<sup>1</sup>, Ryo Kusano<sup>1</sup>, Atsumi Hando<sup>1</sup>, Nanako Iwaki<sup>1</sup>, Maulana Ariefai<sup>1</sup>, Keisuke Ikeda<sup>2</sup>, Tomoshi Kameda<sup>3</sup>

<sup>1</sup>Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan, <sup>2</sup>Department of Biointerface Chemistry, Faculty of Pharmaceutical Sciences, University of Toyama, Toyama, Japan, <sup>3</sup>Artificial Intelligence Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Tokyo, Japan

## Heme proteins

### **\*27P-067** Two distinct conformations in apo forms of bacterial heme ABC transporter

Machika Kataoka<sup>1,2</sup>, Ayaho Abe<sup>1,2</sup>, Chai Gopalasingam<sup>2</sup>, Christoph Gerle<sup>2</sup>, Hideki Shigematsu<sup>3</sup>, Masaki Yamamoto<sup>2</sup>, Hiroshi Sugimoto<sup>2</sup>

<sup>1</sup>Graduate School of Science, University of Hyogo, Japan., <sup>2</sup>RIKEN SPring-8 Center, Hyogo, Japan., <sup>3</sup>JASRI, Hyogo, Japan.

### **27P-068** Dramatic Effects of Chemical Modifications on the Function of a Classical Allosteric Protein by Pin-Point Changes in Hydrophobicity

Antonio Tsuneshige

Department of Frontier Bioscience, and Research Center for Micro-Nano Technology, Hosei University, and Tokyo, Japan

## Membrane proteins

### **\*27P-069** Vibrational spectroscopic study of chemical interaction between $\kappa$ -opioid receptor (KOR) and ligands having morphinan structure

Ryo Nishikawa<sup>1</sup>, Kota Katayama<sup>1,2</sup>, Seiya Iwata<sup>1</sup>, Ryoji Suno<sup>1</sup>, Chiyo Suno<sup>3</sup>, Takuya Kobayashi<sup>3</sup>, Hideki Kandori<sup>1,2</sup>

<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, Aichi, Japan, <sup>2</sup>OptoBioTechnology Research Center, Aichi, Japan, <sup>3</sup>Department of Medical Chemistry, Kansai Medical University, Osaka, Japan

### **\*27P-070** Role of ANT1 in proton transport: New insights into the mechanism of fatty acid anion sliding at the protein-lipid interface

Sanja Vojvodić<sup>3</sup>, Juergen Kreiter<sup>2</sup>, Mario Vazdar<sup>1</sup>, Elena E. Pohl<sup>3</sup>

<sup>1</sup>Department of Mathematics, Informatics, and Cybernetics, Faculty of Chemical Engineering, University of Chemistry and Technology, Prag, Czech Republic, <sup>2</sup>Institute of Molecular and Cellular Physiology, Stanford Medical School, Stanford, USA, <sup>3</sup>Physiology and Biophysics, University of Veterinary Medicine, Vienna, Austria

# Thursday, June 27

- \*27P-071** **Cryo-EM Structural Analysis of *Enterococcus hirae* V-ATPase with Improved Resolution**  
 Yuan-E Lee<sup>1</sup>, Raymond Burton-Smith<sup>1,3</sup>, Akihiro Otomo<sup>2,3</sup>, Takeshi Murata<sup>4</sup>, Ryota Iino<sup>2,3</sup>, Kazuyoshi Murata<sup>1,3</sup>  
<sup>1</sup>ExCELLS/NIPS, Okazaki, Japan, <sup>2</sup>IMS, Okazaki, Japan, <sup>3</sup>SOKENDAI, Hayama, Japan, <sup>4</sup>Chiba University, Chiba, Japan
- \*27P-072** **Solid-state NMR analysis of wild-type and mutant Schizorhodopsin proteins**  
 Akito Kitaguchi<sup>1</sup>, Seiya Tajima<sup>1</sup>, Toshio Nagashima<sup>2</sup>, Toshio Yamazaki<sup>2</sup>, Hideki Kandori<sup>3</sup>, Keiichi Inoue<sup>4</sup>, Izuru Kawamura<sup>1</sup>  
<sup>1</sup>Yokohama National University, Japan, <sup>2</sup>RIKEN RSC, <sup>3</sup>Nagoya Institute of Technology, Japan, <sup>4</sup>The Institute for Solid State Physics, The University of Tokyo, Japan
- \*27P-073** **Zn<sup>2+</sup> Ion Transportation Mechanisms of TRPC6 Channels: All-Atom Molecular Dynamics Simulation**  
 Sirin Sittivanichai, Kowit Hengphasatporn, Yasuteru Shigeta  
 Center for Computational Sciences, University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki, 305-8577, Japan
- \*27P-074** **Structural Basis for Signaling and Drug-Induced Activation of the Trk Receptors**  
 Erik Kot<sup>1</sup>, Sergey Goncharuk<sup>2</sup>, Ekaterina Vasilieva<sup>3</sup>, Alexandra Shabalkina<sup>2</sup>, María Franco<sup>4</sup>, Ekaterina Lyukmanova<sup>1</sup>, Alexander Arseniev<sup>2</sup>, Andrea Benito-Martínez<sup>4</sup>, Mario Costa<sup>5,6</sup>, Antonino Cattaneo<sup>6</sup>, Marçal Vilar<sup>4</sup>, Konstantin Mineev<sup>7</sup>  
<sup>1</sup>Shenzhen MSU-BIT University, Shenzhen, China, <sup>2</sup>Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia, <sup>3</sup>Charité Medical University, Berlin, Germany, <sup>4</sup>Instituto de Biomedicina de Valencia-CSIC, València, Spain, <sup>5</sup>CNR Neuroscience Institute, Pisa, Italy, <sup>6</sup>Scuola Normale Superiore Laboratory of Biology, Pisa, Italy, <sup>7</sup>Goethe University Frankfurt, Frankfurt am Main, Germany
- 27P-075** **New Lipid-Bilayer Nanodiscs for Membrane-Protein Biophysics**  
 Sandro Keller, David Glueck, Lena Bauernhofer, Loretta Eggenreich, Carolyn Vargas  
 Biophysics, Institute of Molecular Biosciences (IMB), University of Graz, Austria

## Poster Sessions

---

---

**27P-076**      **Coupling of ATP reactions with allocrite transport in heme ABC transporter; BhuUV-T, revealed by time-resolved spectroscopy.**

Tetsunari Kimura<sup>1,2</sup>, Ayaka Naka<sup>1</sup>, Akiho Hara<sup>1</sup>, Yasuhiro Kobori<sup>1,2</sup>, Yoshitsugu Shiro<sup>3</sup>, Hiroshi Sugimoto<sup>3,4</sup>

<sup>1</sup>Kobe University, Graduate School of Science, Department of Chemistry, <sup>2</sup>Kobe University, Molecular Photoscience Research Center, <sup>3</sup>University of Hyogo, Graduate School of Science, Department of Life Science, <sup>4</sup>RIKEN, SPring-8 Center

**27P-077**      **Understanding the Structure and Receptor Selectivity of Histamine H4 Receptor**

Dohyun Im<sup>1</sup>, Jun-ichi Kishikawa<sup>2</sup>, Yuki Shiimura<sup>3</sup>, Yukihiro Sugita<sup>4</sup>, Takeshi Noda<sup>4</sup>, Takayuki Kato<sup>5</sup>, Hidetsugu Asada<sup>1</sup>, So Iwata<sup>1</sup>

<sup>1</sup>Department of Cell Biology, Graduate School of Medicine, Kyoto University, Kyoto, Japan, <sup>2</sup>Department of Applied Biology, Kyoto Institute of Technology, Kyoto, Japan, <sup>3</sup>Institute of Life Science, Kurume University, Kurume, Fukuoka, Japan, <sup>4</sup>Laboratory of Ultrastructural Virology, Institute for Life and Medical Sciences, Kyoto University, Kyoto, Japan, <sup>5</sup>Institute for Protein Research, Osaka University, Suita, Osaka, Japan

**27P-078**      **Generation of human TMEM16F-specific affibodies**

Eunyoung Kim<sup>1</sup>, Jinho Bang<sup>2</sup>, Ji Hye Sung<sup>1</sup>, Jonghwan Lee<sup>2</sup>, Sunghyun Kim<sup>2</sup>, Byoung-Cheol Lee<sup>1</sup>

<sup>1</sup>Korea Brain Research Institute, Neurovascular Unit Research Group, Daegu 41068, Korea, <sup>2</sup>Korea Institute of Ceramic Engineering and Technology, Bio-Healthcare Materials Center, Cheongju, Korea

### DNA & DNA binding proteins

**\*27P-079**      **High-speed AFM analysis of effects of drugs on the dynamic DNA morphologies interacting with MDP1, dormancy induction protein of *Mycobacterium tuberculosis***

Kaho Nakamoto<sup>1</sup>, Rei Moriya<sup>1</sup>, Kenichi Umeda<sup>2</sup>, Akihito Nishiyama<sup>3</sup>, Sohkiichi Matsumoto<sup>3</sup>, Noriyuki Kodera<sup>2</sup>

<sup>1</sup>Grad. Sch. Math. & Phys., Kanazawa Univ., <sup>2</sup>WPI-NanoLSI, Kanazawa Univ., <sup>3</sup>Dept. Bacteriol., Niigata Univ. Sch. Med.

**\*27P-080**      **Single-molecule imaging of MDP1, dormancy induction protein of *Mycobacterium tuberculosis*, with high-speed AFM**

Yuna Goto<sup>1</sup>, Kaho Nakamoto<sup>1</sup>, Kenichi Umeda<sup>2</sup>, Akihito Nishiyama<sup>3</sup>, Sohkiichi Matsumoto<sup>3</sup>, Noriyuki Kodera<sup>2</sup>

<sup>1</sup>Grad. Sch. Math. & Phys., Kanazawa Univ., <sup>2</sup>WPI-NanoLSI, Kanazawa Univ., <sup>3</sup>Dept. Bacteriol., Niigata Univ. Sch. Med.

**Thursday, June 27****\*27P-081**    **Template-free oligonucleotide synthesis by Terminal Deoxynucleotidyl Transferase in a microreactor array**Yusuke Miyata, Hiroshi Ueno, Hiroyuki Noji

Department of Applied Chemistry, School of Engineering, The University of Tokyo

**27P-082**    **Phosphorylation and histone peptides reduce main- but not side-chain dynamics of N-terminal intrinsically disordered region of HP1 during phase separation, as studied by conventional and TOAC spin labels**Isao Suetake<sup>1,2</sup>, Toshiki Takei<sup>2</sup>, Tomoaki Sugishiata<sup>2</sup>, Shun Ito<sup>2</sup>, Kazunobu Sato<sup>3</sup>, Yuichi Mishima<sup>2</sup>, Kohei Muraoka<sup>2</sup>, Toru Kawakami<sup>2</sup>, Yoh Matsuki<sup>2</sup>, Toshimichi Fujiwara<sup>2</sup>, Takeji Takui<sup>3</sup>, Makoto Miyata<sup>3</sup>, Hironobu Hojo<sup>2</sup>, Toshiaki Arata<sup>2,3</sup><sup>1</sup>Grad. Sch. Sci., Nutritional Sci., Nakamura Gakuen Univ., Japan, <sup>2</sup>Inst. Protein Res., Osaka Univ., Japan, <sup>3</sup>Grad. Sch. Sci., Osaka Metropolitan Univ., Japan**RNA & RNA binding proteins****27P-083**    **Short repeat RNA suppresses aggregation of ALS-causative protein TDP-43 and its 25 kDa carboxy-terminal fragment**Ai Fujimoto<sup>1</sup>, Akira Kitamura<sup>2,3</sup><sup>1</sup>Graduate school of Life Science, Hokkaido University, Hokkaido, Japan, <sup>2</sup>Faculty of Advanced Life Science, Hokkaido University, Hokkaido, Japan, <sup>3</sup>PRIME, AMED**DNA/RNA nanotechnology****\*27P-084**    **How to engineer a fast-moving DNA-nanoparticle motor with long run length and high unidirectionality?**Takanori Harashima<sup>1,2</sup>, Akihiro Otomo<sup>1,2</sup>, Ryota Iino<sup>1,2</sup><sup>1</sup>Institute for Molecular Science, National Institutes of Natural Sciences, <sup>2</sup>Graduate Institute for Advanced Studies, SOKENDAI**\*27P-085**    **Timing-controlled dynamics of DNA droplet-based artificial cell**Tomoya Maruyama<sup>1</sup>, Masahiro Takinoue<sup>1,2,3</sup><sup>1</sup>Department of Life Science and Technology, Tokyo Institute of Technology, Japan, <sup>2</sup>Department of Computer Science, Tokyo Institute of Technology, Japan, <sup>3</sup>Living System Materialogy (LisM) Research Group, International Research Frontiers Initiative (IRFI), Tokyo Institute of Technology, Japan

## Poster Sessions

---

---

- \*27P-086**    **Regulation of molecular distribution in lipid vesicles based on artificial DNA cortex**  
Takuro Yoshinaga, Koki Shibata, Yusuke Sato  
Department of Intelligent Systems Engineering, Kyushu Institute of Technology, Japan
- \*27P-087**    **Mechanical properties of artificial cells with DNA cytoskeleton**  
Kazutoshi Masuda<sup>1</sup>, Miho Yanagisawa<sup>1,2</sup>  
<sup>1</sup>Graduate School of Arts & Science, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Komaba Institute for Science, The University of Tokyo, Tokyo, Japan
- \*27P-088**    **Lipid nanoparticle fusion with a phospholipid membrane**  
Jan Šimek, Nestor Mora, Radek Šachl  
J. Heyrovsky Institute of Physical Chemistry
- \*27P-089**    **Spontaneous film-like DNA structure formation at the oil-air interface**  
Daichi Tominaga<sup>1</sup>, Shogo Hamada<sup>2</sup>, Yusuke Sato<sup>1</sup>  
<sup>1</sup>Department of Intelligent Systems Engineering, Kyushu Institute of Technology, Japan, <sup>2</sup>Department of Computer Science, Tokyo Institute of Technology, Japan

### Nucleic acid: Others

- \*27P-090**    **The effect of Temperature and Pressure on the structural transition from the quadruplex to random coil of VEGF**  
Hiroto Yamasaki, Toshiki Nakao, Minoru Kato  
Ritsumeikan University
- 27P-091**    **Modelling complex and large RNA structures to advance RNA biology and therapeutics**  
Naoto Hori, James A. Robins, Huong T. Vu  
School of Pharmacy, University of Nottingham

### Chromatin & Chromosomes

- \*27P-092**    **DNA Unwinding analysis of N-terminal tailless nucleosomes using nanopore measurements**  
Satoshi Ogihara<sup>1</sup>, Hikaru Nozawa<sup>1</sup>, Takumi Oishi<sup>2</sup>, Munetaka Akatsu<sup>2</sup>, Hitoshi Kurumizaka<sup>2</sup>, Sotaro Uemura<sup>1</sup>  
<sup>1</sup>Department of Biological Sciences, Graduate School of Science, The University of Tokyo, <sup>2</sup>Institute for Quantitative Biosciences, The University of Tokyo

## Thursday, June 27

### **27P-093** Effect of RNA expression on chromatin phase separation : Molecular Dynamics simulation

[Shaya Shiraishi](#), Yuuki Norizoe, Takuya Saito, Takahiro Sakaue  
Department of Physical Sciences, Aoyama Gakuin University

#### Electronic

### **\*27P-095** Electrochemical activity of catalytic amyloids: self-assembly of (XH)<sub>4</sub> peptides and hemin on graphite electrodes

[Marie Sugiyama](#)<sup>1</sup>, Luo Wei<sup>1</sup>, Ayhan Yurtsever<sup>2</sup>, Takeshi Fukuma<sup>2</sup>, Yuhei Hayamizu<sup>1</sup>

<sup>1</sup>Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>Kanazawa University, Kanazawa, Japan

#### Water & Hydration & Electrolyte

### **\*27P-096** Prediction of hydration structures over membrane proteins using deep learning in combination with the empirical hydration distribution

[Kochi Sato](#)<sup>1,2,3</sup>, Mao Oide<sup>4,5</sup>, Masayoshi Nakasako<sup>1,2</sup>

<sup>1</sup>Department of Physics, Keio University, Kanagawa, Japan, <sup>2</sup>SPRING-8 Center, RIKEN, Hyogo, Japan, <sup>3</sup>SPRING, Japan Science and Technology Agency, Tokyo, Japan, <sup>4</sup>Institute for protein research, Osaka University, Osaka, Japan, <sup>5</sup>PRESTO, Japan Science and Technology Agency, Tokyo, Japan

### **27P-097** Hydration and Fluctuation Dynamics of a Membrane Transport Protein-Glucose Complex

[Tatsuki Kawauchi](#)<sup>1</sup>, Tomohiko Hayashi<sup>1</sup>, Mitsunori Ikeguchi<sup>2</sup>

<sup>1</sup>Graduate School of Science and Technology, Niigata University, <sup>2</sup>Graduate School of Medical Life Science, Yokohama City University

#### Molecular genetics & Gene expression

### **27P-098** Nine-banded armadillo transcriptome and chromatin accessibility at single-cell reveal persistent identity signatures in concordance with cell population variations

[Risa Karakida Kawaguchi](#)<sup>1,2</sup>, Sara Ballouz<sup>2</sup>, Maria T Pena<sup>3</sup>, Leon French<sup>4</sup>, Frank M. Knight<sup>5</sup>, Linda B. Adams<sup>3</sup>, Jesse Gillis<sup>2,4</sup>

<sup>1</sup>Center for iPS Cell Research and Application, Kyoto University, <sup>2</sup>Cold Spring Harbor Laboratory, <sup>3</sup>National Hansen's Disease Program, <sup>4</sup>University of Toronto, <sup>5</sup>University of the Ozarks

# Poster Sessions

## Morphogenesis and Development

**\*27P-099** Deep learning approach to investigate tissue hydraulics during ovarian follicle development.

Jake Turley<sup>1</sup>, Kim Whye Leong<sup>1</sup>, Chii Jou Chan<sup>1,2</sup>

<sup>1</sup>Mechanobiology Institute, National University of Singapore, <sup>2</sup>Department of Biological Sciences, National University of Singapore

## Muscle

**27P-100** Morphological discrimination of isolated sarcoplasmic reticulum vesicles in different Ca<sup>2+</sup> concentrations using deep learning

Katsuya Saito<sup>1</sup>, Kenji Etchuya<sup>2</sup>, Jun Nakamura<sup>3</sup>, Chikara Sato<sup>1,3,4,5</sup>, Makiko Suwa<sup>1,2</sup>

<sup>1</sup>Biological Science Course, Graduate School of Science and Engineering, Aoyama Gakuin University, Kanagawa, Japan, <sup>2</sup>Chem. Biological Science Course, Department. Science and Engineering, Aoyama Gakuin University, Kanagawa, Japan, <sup>3</sup>National Institute of Advanced Industrial Science and Technology (AIST), Ibaraki, Japan <sup>4</sup>Division of Immune Homeostasis, Department of Pathology and Microbiology, Nihon University School of Medicine, Tokyo, Japan, <sup>5</sup>Division of Immune Homeostasis, Department of Pathology and Microbiology, Nihon University School of Medicine, Tokyo, Japan, <sup>5</sup>Division of Microbiology, Department of Pathology and Microbiology, Nihon University School of Medicine, Tokyo, Japan

## Molecular motor

**\*27P-101** Microscopic Choreography: Unraveling Molecular Properties of Cytoplasmic Dynein Shaping Collective Motion of Microtubules in vitro

Yosuke Harada<sup>1,2</sup>, Kazuhiro Oiwa<sup>1,2</sup>

<sup>1</sup>Department of Life Science, Graduate School of Science, University of Hyogo, Hyogo, Japan, <sup>2</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, Hyogo, Japan

**\*27P-102** Biochemical Characterization of *C. elegans* Kinesin Bmk-1

Toru Kurosaka, Shunsuke Kumagai, Fofou Yonta Tostani, Shinsaku Maruta  
Department of Biosciences, Graduate School of Science and Engineering Soka University, Hachioji, Tokyo JAPAN



- \*27P-103** **Rejuvenating actin filaments: Direct observation of nucleotide exchange in actin filaments enhanced by myosin II**  
Kenta Toshino, Taro QP Uyeda  
Dept. Pure & Appl. Physics, Grad. Sch. Adv. Sci. & Eng., Waseda Univ.
- \*27P-104** **Molecular dynamics observation of rotational motion in the stator unit of the flagellar motor**  
Takumi Matsumoto, Yukinari Kamiyama, Mitsunori Takano  
Dept. of Pure & Appl. Phys., Grad. Sch. of Adv. Sci. and Eng., Waseda Univ., Tokyo, Japan
- \*27P-105** **Negative differential resistance of bio-molecular motor F1-ATPase**  
Haruto Kimura, Shoichi Toyabe, Yohei Nakayama  
Department of Applied Physics, Graduate School of Engineering, Tohoku University
- 27P-106** **V-ATPase rotation probed by Janus nanoparticle**  
Akihiro Otomo<sup>1,2</sup>, Jared Wiemann<sup>3</sup>, Swagata Bhattacharyya<sup>3</sup>, Yan Yu<sup>3</sup>,  
Ryota Iino<sup>1,2</sup>  
<sup>1</sup>Institute for Molecular Science, National Institutes of Natural Sciences, Okazaki, Japan, <sup>2</sup>Graduate Institute for Advanced Studies, SOKENDAI, Hayama, Japan, <sup>3</sup>Department of Chemistry, Indiana University, Bloomington, USA
- 27P-107** **Detecting conformations of F1-ATPase to elucidate the rotation mechanism**  
Kenta Suga<sup>1</sup>, Fumika Ogura<sup>1</sup>, Hiroki Yamashita<sup>1</sup>, Hiroki Kaizu<sup>1</sup>,  
Ayari Tagawa<sup>1</sup>, Mitsuhiro Sugawa<sup>2</sup>, Nobukiyo Tanaka<sup>1</sup>, Tomoko Masaike<sup>1</sup>  
<sup>1</sup>Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science, Japan, <sup>2</sup>Graduate School of Arts and Sciences, The University of Tokyo
- 27P-108** **Cooperation among c-subunits of FoF1-ATP synthase in rotation-coupled proton translocation by hetero-mutated c-ring**  
Noriyo Mitome<sup>1</sup>, Shintaroh Kubo<sup>2</sup>, Sumie Ohta<sup>3</sup>, Hikaru Takashima<sup>4</sup>,  
Yuto Shigefuji<sup>4</sup>, Toru Niina<sup>2</sup>, Shoji Takada<sup>2</sup>  
<sup>1</sup>Faculty of Education, Tokoha University, <sup>2</sup>Department of Biophysics, Graduate School of Science, Kyoto University, <sup>3</sup>National Institute of Technology, Numazu College, <sup>4</sup>National Institute of Technology, Ube College

# Poster Sessions

---

---

- 27P-109**     **DNA Hybridization kinetics in Active Matter self-assembly**  
Mst Rubaya Rahsid<sup>1</sup>, Yamashina Takefumi<sup>2</sup>, Kawamata Ibuki<sup>1</sup>, Marie Tani<sup>1</sup>,  
Masatoshi Ichikawa<sup>1</sup>, Akira Kakugo<sup>1</sup>  
<sup>1</sup>Department of Physics, Kyoto University, Japan, <sup>2</sup>Research Centre for Advanced  
Science and Technology, The University of Tokyo, Japan

## Single Molecule Biophysics

- \*27P-110**     **Microsecond single molecule dynamics measurement of SARS-CoV-2  
Spike protein using Diffracted X-ray Tracking**  
Daisuke Sasaki<sup>1</sup>, Tatsuya Arai<sup>1,2</sup>, Hiroshi Sekiguchi<sup>3</sup>, Kazuhiro Mio<sup>2</sup>,  
Yuji Sasaki<sup>1,2,3</sup>  
<sup>1</sup>Graduate School of Frontier Sciences, The University of Tokyo, <sup>2</sup>AIST-UTokyo  
Advanced Operando Measurement Technology Open Innovation Laboratory  
(OPERANDO OIL), <sup>3</sup>Center for Synchrotron Radiation Research, JASRI
- \*27P-111**     **REGULATORY MECHANISMS OF KINESIN FUNCTION AT VARYING  
PH**  
Suvranta Tripathy, Fawaz Baig, Hassan Bazzi  
University of Michigan Dearborn
- \*27P-112**     **Impact of mutations on cadherin 23 functions and leads to hearing-  
loss disease**  
Gaurav Kumar Bhati, Surbhi Garg, Pritam Saha, Sabyasachi Rakshit  
Department of Chemical sciences, Indian Institute of Science Education and Research  
Mohali, India
- \*27P-113**     **Direct observation of a single DNA molecule responding for the AC  
electric field and different physical environment.**  
Yunosuke Fuji, Shin Tkano, Takuma Yoshinaga, Yuuta Moriyama,  
Toshiyuki Mitsui  
Grad. Sch. of Sci. and Eng. Aoyama Gakuin Univ.
- \*27P-114**     **Photothermal assisted ultra-low concentration detection using  
nanopore sensing**  
Hirohito Yamazaki<sup>1,2</sup>, Kota Kaito<sup>2</sup>  
<sup>1</sup>Top Runner Incubation Center for Academia-Industry Fusion, Nagaoka University of  
Technology, Nagaoka, <sup>2</sup>Department of Mechanical Engineering, Nagaoka University  
of Technology

## Thursday, June 27

**27P-115**      **Single-molecule analysis of the behavioral dynamics of EGFR cancer mutants with resistance to anticancer drugs**

Michio Hiroshima<sup>1,2</sup>, Masahiro Ueda<sup>1,2</sup>

<sup>1</sup>Osaka University, <sup>2</sup>RIKEN BDR

**27P-116**      **Mechanistic insight into the mechanical unfolding of integral membrane proteins**

Hao Yu

Huazhong University of Science and Technology

### Cell biology: Adhesion

**27P-117**      **Study of adhesion factor in Acanthamoeba bunch formation caused by Hokutovirus infection**

Yuto Shimada<sup>1</sup>, Masaharu Takemura<sup>2</sup>, Kazuyoshi Murata<sup>1,3</sup>

<sup>1</sup>Exploratory Research Center on Life and Living Systems, National Institutes of Natural Sciences, <sup>2</sup>Tokyo University of Science, <sup>3</sup>National Institute for Physiological Sciences, National Institutes of Natural Sciences

### Cell biology: Motility

**\*27P-118**      **The mechanical properties of fibroblasts in co-culture system**

Arata Nagai, Kaito Kojima, Hiromu Kuwabara, Yuuta Moriyama, Toshiyuki Mitsui

Grad. Sch. of Sci. and Eng. Aoyama Gakuin Univ.

**\*27P-119**      **Mechanism of bacterial actin driven motility reconstituted in a minimal synthetic bacterium**

Hana Kiyama<sup>1</sup>, Shigeyuki Kakizawa<sup>2</sup>, Daichi Takahashi<sup>1,3</sup>, Makoto Miyata<sup>1,4</sup>

<sup>1</sup>Graduate School of Science, Osaka Metropolitan University, Osaka, Japan, <sup>2</sup>Bioproduction Research Institute, AIST, Tsukuba, Japan, <sup>3</sup>Research Institute for Interdisciplinary Science, Okayama University, Okayama, Japan, <sup>4</sup>The OMU Advanced Research Institute for Natural Science and Technology, Osaka Metropolitan Univ., Osaka, Japan

**\*27P-120**      **Light-Induced Control of Archaellum Rotation in Haloacterium salinarum**

Ishii Kazuki<sup>1</sup>, Ayaka Ihara<sup>1</sup>, Daisuke Nakane<sup>2</sup>, Takayuki Nishizaka<sup>1</sup>

<sup>1</sup>Gakushuin University, <sup>2</sup>University of Electro-Communications

# Poster Sessions

---

- \*27P-121** **Haloplasma motility reconstituted in a minimal synthetic bacterium, JCVI-syn3B**  
Mone Mimura<sup>1</sup>, Hana Kiyama<sup>1</sup>, Shingo Kato<sup>2</sup>, Yuya Sasajima<sup>1</sup>, Atsuko Uenoyama<sup>1</sup>, Shigeyuki Kakizawa<sup>3</sup>, André Antunes<sup>4</sup>, Tomoko Miyata<sup>5,6</sup>, Fumiaki Makino<sup>5,6,7</sup>, Keiichi Namba<sup>5,6</sup>, Makoto Miyata<sup>1,8</sup>  
<sup>1</sup>Grad. Sch. Sci., Osaka Metropolitan Univ., Japan, <sup>2</sup>RIKEN BRC., JCM., Japan, <sup>3</sup>Bioproduction Res. Inst., AIST., Japan, <sup>4</sup>Macau Univ. of Sci. and Tech., China, <sup>5</sup>Grad. Sch. of Frontier Biosci., Osaka Univ., Suita, Japan, <sup>6</sup>JEOL YOKOGUSHI Res. Alliance Lab. Osaka Univ., Suita, Japan, <sup>7</sup>JEOL Ltd, Akishima, Tokyo, Japan, <sup>8</sup>OCARINA, Osaka Metropolitan Univ., Japan
- \*27P-122** **Gliding machinery of Mycoplasma mobile observed by electron cryotomography**  
Minoru Fukushima<sup>1</sup>, Tomoko Miyata<sup>2,3</sup>, Takuma Toyonaga<sup>1</sup>, Keiichi Namba<sup>2,3</sup>, Makoto Miyata<sup>1,4</sup>  
<sup>1</sup>Grad. Sch. Sci., Osaka Metropolitan Univ., Osaka, Japan, <sup>2</sup>Grad. Sch. Frontier Biosci., Osaka Univ., Suita, Osaka, Japan, <sup>3</sup>JEOL YOKOGUSHI Res. Alliance Lab. Osaka Univ. Suita, Osaka, Japan, <sup>4</sup>OCARINA, Osaka Metropolitan Univ., Osaka, Japan
- \*27P-123** **Rapid response of bacterial motility with pressure change**  
Seiichiro Kinoshita, Masayoshi Nishiyama  
Grad.Sch.Sci. and Eng., Kindai Univ.
- \*27P-124** **Visualization and analysis of MreBs driving Spiroplasma motility in minimal synthetic bacterium**  
Yoshiki Tanaka<sup>1</sup>, Hana Kiyama<sup>1</sup>, Takuma Toyonaga<sup>1,2</sup>, Makoto Miyata<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. Sci., Osaka Metro Univ., <sup>2</sup>OCARINA, Osaka Metro Univ.
- \*27P-125** **In vitro analysis of the bacterial actin MreB molecule that gives swimming motility to the minimal synthetic bacterium JCVI-syn3B.**  
Satoshi Kanamori<sup>1</sup>, Daichi Takahashi<sup>2</sup>, Yuhei Tahara<sup>1</sup>, Hana Kiyama<sup>1</sup>, Makoto Miyata<sup>1</sup>  
<sup>1</sup>Graduate School of Science, Osaka Metropolitan University, <sup>2</sup>Research Institute for Interdisciplinary Science, Okayama University
- 27P-126** **CryoEM structures of the growing end of the bacterial flagellar hook.**  
Haruto Takeuchi<sup>1</sup>, Sae Hashimoto<sup>1</sup>, Tomoko Miyata<sup>2,3</sup>, Fumiaki Makino<sup>2,3,4</sup>, Keiichi Namba<sup>2,3</sup>, Norihiro Takekawa<sup>1</sup>, Katsumi Imada<sup>1</sup>  
<sup>1</sup>Dept. of Macromol. Sci., Grad. Sch. of Sci., Osaka Univ., <sup>2</sup>Grad. Sch. of Frontier Biosci., Osaka Univ., <sup>3</sup>JEOL YOKOGUSHI Res. Alliance Lab., Osaka Univ., <sup>4</sup>JEOL Ltd, Akishima

## Thursday, June 27

**27P-127**      **Activation of the PomA/B flagellar stator by a site-specific chemical modification in the plug segment**

Hiroaki Koiwa<sup>1</sup>, Akihiro Otomo<sup>2</sup>, Yuki Tajimi<sup>3</sup>, Tatsuro Nishikino<sup>4</sup>, Michio Homma<sup>3</sup>, Takayuki Uchihashi<sup>3</sup>, Ryota Iino<sup>2</sup>, [Seiji Kojima](#)<sup>1</sup>

<sup>1</sup>Department of Biological Science, Graduate School of Science, Nagoya University, <sup>2</sup>Institute for Molecular Science, <sup>3</sup>Department of Physics, Graduate School of Science, Nagoya University, <sup>4</sup>Department of Life Science and Applied Chemistry, Nagoya Institute of Technology

**27P-128**      **Analysis of the *Virio alginolyticus* lateral flagellar motor genes, *lafT* and *lafU***

[Kazuki Yokoyama](#)<sup>1</sup>, Norihiro Takekawa<sup>2</sup>, [Seiji Kojima](#)<sup>1</sup>

<sup>1</sup>Department of biological science, Graduate school of Science, Nagoya University, <sup>2</sup>Department of macromolecular science, Graduate school of Science, Osaka University

**27P-129**      **Structural change of ATPase ring complex of the flagellar type III export apparatus revealed by cryoEM analysis and high-speed AFM**

[Norihiro Takekawa](#)<sup>1</sup>, Asako Usui<sup>1</sup>, Yuki Tajimi<sup>2</sup>, Miki Kinoshita<sup>3</sup>, Tohru Minamino<sup>3</sup>, Takayuki Uchihashi<sup>2</sup>, Katsumi Imada<sup>1</sup>

<sup>1</sup>Dept. of Macromol. Sci., Grad. Sch. of Sci., Osaka Univ., <sup>2</sup>Dept. of Phys. Sci., Grad. Sch. of Sci., Nagoya Univ., <sup>3</sup>Grad. Sch. of Frontier Biosci., Osaka Univ.

### Cell biology: Cytoskeleton & Membrane skeleton

**\*27P-130**      **Cryo-ET of vertebrate cilia revealed that Calaxin stabilizes the docking of outer arm dyneins onto ciliary doublet microtubule**

[Hiroshi Yamaguchi](#), Motohiro Morikawa, Masahide Kikkawa

Department of Cell Biology & Anatomy, Grad. Sch. Med., The University of Tokyo, Tokyo, Japan

**\*27P-131**      **Capping and severing mechanisms of Cytochalasin D to actin filament by TIRF observation**

[Takahiro Mitani](#)<sup>1</sup>, Shuichi Takeda<sup>2</sup>, Ikuko Fujiwara<sup>1</sup>, Hajime Honda<sup>1</sup>

<sup>1</sup>Dep. of Material Sci. and Bioeng., Nagaoka Univ. of Tech., Niigata, Japan., <sup>2</sup>RIIS, Okayama Univ., Okayama, Japan.

## Poster Sessions

---

- \*27P-132**      **Physically specific domain at the plasma membrane induced by transmembrane phospholipid movement during myoblast cytokinesis**  
Akira Murakami<sup>1</sup>, Kotaro Hirano<sup>1</sup>, Junya Sano<sup>1</sup>, Kohki Okabe<sup>2</sup>, Yuji Hara<sup>1</sup>  
<sup>1</sup>School of Pharmaceutical Sciences, University of Shizuoka, <sup>2</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo
- \*27P-133**      **Elucidating the Role of Spiroplasma fibril protein using synthetic bacterium, JCVI syn3**  
Ali Ahsan, Hana Kiyama, Makoto Miyata  
Osaka Metropolitan University, Graduate School of Science
- 27P-134**        **Domain characterization of Archaea gelsolin for inhibiting actin polymerization by TIRF and crystal structure observations**  
Horyo Mizuki<sup>2</sup>, Shuichi Takeda<sup>1</sup>, Robert Robinson<sup>1</sup>, Ikuko Fujiwara<sup>2</sup>  
<sup>1</sup>RIIS, Okayama Univ, <sup>2</sup>Materials Sciences and Bioengineering, Nagaoka University of Technology
- 27P-135**        **Thermodynamic Analysis of Cofilin–F-actin Interaction**  
Hideyuki Komatsu<sup>1</sup>, Nayu Itou<sup>1</sup>, Sinobu Sato<sup>2</sup>, Shigeori Takenaka<sup>2</sup>  
<sup>1</sup>Department of Bioscience and Bioinformatics, Kyushu Institute of Technology, <sup>2</sup>Department of Applied Chemistry, Kyushu Institute of Technology
- 27P-136**        **The phase separation of EB and TEN2 promotes inhibitory synapse formation**  
Sotaro Ichinose, Hirohide Iwasaki  
Department of Anatomy, Gunma University Graduate School of Medicine, Gunma, Japan

### Cell biology: Signal transduction & Cell membrane

- \*27P-137**      **Aquaporin-3 and aquaporin-5 differentially modulate cell stiffness and cell-cell adhesion and promote cell migration**  
Catarina Pimpão<sup>1,2</sup>, Filomena A. Carvalho<sup>3</sup>, Inês V. da Silva<sup>1,2</sup>, Nuno C. Santos<sup>3</sup>, Graça Soveral<sup>1,2</sup>  
<sup>1</sup>Research Institute for Medicines (iMed.Ulisboa), Faculty of Pharmacy, Universidade de Lisboa, 1649-003 Lisbon, Portugal, <sup>2</sup>Department of Pharmaceutical Sciences and Medicines, Faculty of Pharmacy, Universidade de Lisboa, 1649-003 Lisbon, Portugal, <sup>3</sup>Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, 1649-028 Lisbon, Portugal

**Thursday, June 27**

- \*27P-138** **Aquaporin-3 is involved in inflammasome activation contributing to the settings of inflammatory response in THP-1 cells**  
Inês V. da Silva<sup>1</sup>, Angela Casini<sup>2</sup>, Pablo Pelegrin<sup>3</sup>, Graça Soveral<sup>1</sup>  
<sup>1</sup>Research Institute for Medicines (iMed.U LISBOA), Faculty of Pharmacy, Universidade de Lisboa, 1649-003 Lisboa, Portugal, <sup>2</sup>Faculty of Chemistry, Technical University of Munich, Lichtenbergstr. 4, 85748, Garching b. München, Germany, <sup>3</sup>Molecular Inflammation Group, Biomedical Research Institute of Murcia (IMIB-Arrixaca), Hospital Clínico Universitario Virgen de la Arrixaca, Carretera Buenavista, 30120 Murcia, Spain
- \*27P-139** **Positive feedback regulation of excitable Ras by RasGEFX for spontaneous signal generation in cell migration**  
Koji Iwamoto<sup>1</sup>, Satomi Matsuoka<sup>1,2,3</sup>, Masahiro Ueda<sup>1,2,3</sup>  
<sup>1</sup>Grad. Sch. Sci., Osaka Univ, Osaka, Japan, <sup>2</sup>Grad. Sch. of Front. Biosci., Osaka Univ, Osaka, Japan, <sup>3</sup>BDR, RIKEN, Osaka, Japan
- 27P-140** **Phosphatidylserine enhances membrane localization and lateral diffusion of active form of Ras for excitability**  
Satomi Matsuoka<sup>1,2,3</sup>, Da Young Shin<sup>2,3</sup>, Michio Hiroshima<sup>1,3</sup>, Hiroaki Takagi<sup>3,4</sup>, Masahiro Ueda<sup>1,2,3</sup>  
<sup>1</sup>Graduate School of Frontier Biosciences, Osaka University, <sup>2</sup>Graduate School of Science, Osaka University, <sup>3</sup>Center for Biosystems Dynamics Research, RIKEN, <sup>4</sup>School of Medicine, Nara Medical University

**Biological & Artificial membrane: Structure & Property**

- \*27P-141** **Nanofluidic model cell membrane platform for molecular analysis of membrane-bound proteins**  
Yu Yoshimura<sup>1</sup>, Nanami Nagatsuka<sup>1</sup>, Ryota Komatsu<sup>1</sup>, Shin-ichi Yusa<sup>2</sup>, Kenichi Morigaki<sup>1,3</sup>  
<sup>1</sup>Graduate School of Agricultural Science, Kobe Univ, Hyogo, Japan, <sup>2</sup>Department of materials Science and Chemistry, University of Hyogo, Japan, <sup>3</sup>Biosignal Research Center, Kobe Univ, Hyogo, Japan
- \*27P-142** **Integrated model membrane arrays generated by self-spreading of lipid bilayers**  
Masako Fujii<sup>1</sup>, Kenichi Morigaki<sup>1,2</sup>  
<sup>1</sup>Grad. of Agri. Sci., Kobe Univ., Hyogo, Japan., <sup>2</sup>Biosignal Res. Ctr., Kobe Univ., Hyogo, Japan.

## Poster Sessions

---

- \*27P-143** **Field model for multistate lateral diffusion of various transmembrane proteins observed in living Dictyostelium cells**  
Kazutoshi Takebayashi<sup>1</sup>, Yoichiro Kamimura<sup>2</sup>, Masahiro Ueda<sup>1,3</sup>  
<sup>1</sup>Center for Biosystems Dynamics Research (BDR), RIKEN, <sup>2</sup>Nara Medical University, <sup>3</sup>Graduate School of Frontier Biosciences, Osaka University
- \*27P-144** **Membrane shapes, liquid-liquid interfaces, and elastocapillarity**  
Lukas Hauer<sup>1</sup>, Katharina Sporbeck<sup>1</sup>, Amir H. Bahrami<sup>2,3</sup>, Roland L. Knorr<sup>1</sup>  
<sup>1</sup>Humboldt-Universität zu Berlin, Berlin, Germany, <sup>2</sup>Bilkent University, Ankara, Turkey, <sup>3</sup>MPI-Dynamics and Self-Organization, Goettingen, Germany
- 27P-145** **Study on the mechanism of double cooperative effect of antimicrobial peptide LL-37 with HNP1 by leakage assay**  
Yuta Sekiya, Kaori Sugihara  
The University of Tokyo, Institute of Industrial Science
- 27P-146** **Induction of Apoptosis by Ceramide Derivatives and Its Potential Mechanisms through Domain Formation**  
Nobuaki Matsumori<sup>1</sup>, Koya Tsujimura<sup>1</sup>, Miho Yakabe<sup>1</sup>, Hideaki Kano<sup>1,2</sup>  
<sup>1</sup>Kyushu University, <sup>2</sup>Keio University
- 27P-147** **Structural effects of Cholesterol, Lanosterol, and Oxysterol on Model Biomembranes**  
Ayumi Okayama, Tatsuya Hoshino, Kohei Wada, Takahashi Hiroshi  
Biophysics Laboratory, Division of Pure and Applied Science, Gunma University, Maebashi, Japan

### Biological & Artificial membrane: Dynamics

- \*27P-148** **Generation of autonomous rotors**  
Veerpal Kaur<sup>1</sup>, Charu Taneja<sup>2</sup>, Subha Shree<sup>3</sup>, Abhishek Chaudhuri<sup>4</sup>, Sabyasachi Rakshit<sup>5</sup>  
<sup>1</sup>Veerpal Kaur, Department of Chemical Sciences, Indian Institute of Science Education and Research Mohali, Mohali, Punjab, India, <sup>2</sup>Charu Taneja, Department of Chemical Sciences, Indian Institute of Science Education and Research Mohali, Mohali, Punjab, India, <sup>3</sup>Subhashree, Department of Physical Sciences, Indian Institute of Science Education and Research Mohali, Mohali, Punjab, India, <sup>4</sup>Abhishek Chaudhuri, Department of Physical Sciences, Indian Institute of Science Education and Research Mohali, Mohali, Punjab, India, <sup>5</sup>Sabyasachi Rakshit, Department of Chemical Sciences, Indian Institute of Science Education and Research Mohali, Mohali, Punjab, India



## Thursday, June 27

**\*27P-149**    **Molecular dynamics investigation of the dynamical response of the interfacial waters near DPPC bilayer to Hyaluronic acid**

Anirban Paul, Jaydeb Chakrabarti

S. N. Bose National Centre for Basic Sciences, Kolkata, India

**\*27P-150**    **Optical Trapping of Membrane Proteins on the Supported Lipid Bilayers**

Yasushi Tanimoto, Shunya Moriyama, Kyoko Masui, Chie Hosokawa

Graduate School of Science, Osaka Metropolitan University

**27P-151**    **Structurally Stable Phospholipid Membrane Tube Developed by Self-assembly of Peptide Receptors**

Noriyuki Uchida<sup>1</sup>, Ryu Ishizaka<sup>1</sup>, Anju Kawakita<sup>1</sup>, Masaki Okumura<sup>2</sup>, Takahiro Muraoka<sup>1,3</sup>

<sup>1</sup>Tokyo University of Agriculture and Technology, <sup>2</sup>Tohoku University, <sup>3</sup>KISTEC

### Biological & Artificial membrane: Transport & Signal transduction

**27P-153**    **Reconstituting G protein-coupled receptors into a supported lipid bilayer using meta-stable peptide nanodiscs**

Fumio Hayashi<sup>1</sup>, Masato Koezuka<sup>2</sup>, Kenich Morigaki<sup>2,3</sup>

<sup>1</sup>Grad Sch Sci, Kobe University, <sup>2</sup>Grad Sch Agri, Kobe University, <sup>3</sup>Biosignal Research Center, Kobe University

### Membraneless Organelle, autophagy, Liquid-liquid phase separation

**\*27P-155**    **TMAO and urea effects on liquid-liquid phase separation of fused in sarcoma**

Keiji Kitamura<sup>1</sup>, Ayano Ohshima<sup>1</sup>, Fuka Sasaki<sup>1</sup>, Yutaro Shiramasa<sup>1</sup>, Soichiro Kitazawa<sup>2</sup>, Ryo Kitahara<sup>1,2</sup>

<sup>1</sup>Graduate School of Pharmacy, Ritsumeikan University, Shiga, Japan, <sup>2</sup>College of Pharmaceutical Sciences, Ritsumeikan University, Shiga, Japan

**\*27P-156**    **Coarse-Grained Molecular Dynamics Study of Coacervate Formation using Elastin-like Polypeptides with Varying Hydrophobicity**

Haruto Takegahara<sup>1</sup>, Yasunori Okamoto<sup>3</sup>, Kenichi Funamoto<sup>2</sup>, Takuya Mabuchi<sup>2,3</sup>

<sup>1</sup>Graduate School of Biomedical Engineering, Tohoku University, <sup>2</sup>Institute of Fluid Science (IFS), Tohoku University, <sup>3</sup>Frontier Research Institute for Interdisciplinary Sciences (FRIS), Tohoku University

## Poster Sessions

---

**\*27P-157** Raman spectroscopic study of liquid-liquid phase separation in Lysozyme/Ovalbumin mixture system

Taiga Sano, Toshiki Nakao, Minoru Kato  
Ritsumeikan University

**27P-158** Liquid-liquid phase separation of the P53 core domain

Amanda Santos Palma<sup>1</sup>, Carlos Henrique Inácio Ramos<sup>2</sup>,  
Leandro Ramos Souza Barbosa<sup>3</sup>

<sup>1</sup>University of São Paulo, São Paulo, Brazil, <sup>2</sup>State University of Campinas, Campinas, Brazil, <sup>3</sup>Brazilian Center for Research in Energy and Materials, CNPEM, Campinas, Brazil

**27P-159** Theoretical studies of protein accumulation during mitosis with Flory-Huggins free energy

Yuuki Karube, Yuuki Norizoe, Takuya Saito, Takahiro Sakaue  
Department of Physical Sciences, Aoyama Gakuin University

**27P-160** Quantitative Analytical Method Based on Machine Learning by Classification of Condensate Forming Cells by Glycolytic Enzymes in *Saccharomyces cerevisiae*

Natsuko Miura<sup>1,2</sup>, Ryuta Saito<sup>3</sup>, Yuki Yoshimura<sup>2</sup>, Kohei Tanaka<sup>3</sup>,  
Michihiko Kataoka<sup>1,2</sup>

<sup>1</sup>Graduate School of Agriculture, Osaka Metropolitan University, <sup>2</sup>Graduate School of Life and Environmental Sciences, Osaka Prefecture University, <sup>3</sup>Discovery Technology Laboratories, Mitsubishi Tanabe Pharma Corporation

### Neuroscience & Sensory systems

**\*27P-161** Controlling Tau Aggregation Using Light-Induced Cellular Models of Tau Oligomers

Tomoya Uchida<sup>1</sup>, Naoki Kato<sup>1</sup>, Shigeo Sakuragi<sup>1</sup>, Akito Hattori<sup>1</sup>,  
Yoshiyuki Soeda<sup>2</sup>, Hideaki Yoshimura<sup>3</sup>, Akihiko Takashima<sup>2</sup>, Hiroko Bannai<sup>1</sup>

<sup>1</sup>Waseda University, School of Advanced Science and Engineering, Tokyo, Japan, <sup>2</sup>Gakushuin University, Faculty of Science, Tokyo, Japan, <sup>3</sup>The University of Tokyo, School of Science, Tokyo, Japan

**Thursday, June 27****27P-162 Specification of Smallest Neural Cell Colony Size for Measurement of Firing or Burst Firing**

Takumi Yamaguchi<sup>1</sup>, Kentaro Kito<sup>2</sup>, Masahito Hayashi<sup>1,2</sup>,  
Tomoyuki Kaneko<sup>1,2</sup>

<sup>1</sup>LaRC, Dept. Frontier Biosci., Hosei Univ., Tokyo, Japan, <sup>2</sup>LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ., Tokyo, Japan

**Neuronal circuit & Information processing****27P-164 Classifying Dynamics of Ising Interaction Networks by Structure of Traffic Diagrams**

Yoshiaki Horiike<sup>1,2</sup>, Shin Fujishiro<sup>3</sup>, Masaki Sasai<sup>3,4</sup>

<sup>1</sup>Department of Applied Physics, Nagoya University, Nagoya, Japan, <sup>2</sup>Department of Neuroscience, University of Copenhagen, Copenhagen, Denmark, <sup>3</sup>Fukui Institute for Fundamental Chemistry, Kyoto University, Kyoto, Japan, <sup>4</sup>Department of Complex Systems Science, Nagoya University, Nagoya, Japan

**Behavior****\*27P-165 Quantitative Description and Investigation into the Mechanism of Gravitactic Swimming Behavior in Coral Larvae**

Asuka Takeda-Sakazume<sup>1,2</sup>, Junko Honjo<sup>6</sup>, Kanae Matsushima<sup>1</sup>,  
Sachia Sasano<sup>4,6</sup>, Yuuko Wada<sup>3</sup>, Minori Oshima<sup>1</sup>, Shoji A. Baba<sup>2</sup>, Kei Yura<sup>2</sup>,  
Yoshihiro Mogami<sup>1,5</sup>, Masayuki Hatta<sup>2</sup>

<sup>1</sup>Graduate School of Humanities and Sciences, Ochanomizu University, Tokyo, Japan, <sup>2</sup>Faculty of Core Research Natural Sciences Division, Ochanomizu University, Tokyo, Japan, <sup>3</sup>Marine and Coastal Research Center, Ochanomizu University, Chiba, Japan, <sup>4</sup>Japan fisheries Research and Education Agency, Yokohama, Japan, <sup>5</sup>The Open University of Japan, Tokyo, Japan, <sup>6</sup>Undergraduate School of Biology, Ochanomizu University, Tokyo, Japan

**Photobiology: Vision & Photoreception****\*27P-166 The structural dynamics study of green-cone pigment by using spectroscopies**

Mizusa Kani<sup>1</sup>, Sayaka Ohashi<sup>1</sup>, Takuma Sasaki<sup>1</sup>, Hiroo Imai<sup>2</sup>,  
Hideki Kandori<sup>1,3</sup>, Kota Katayama<sup>1,3</sup>

<sup>1</sup>Grad. Sch. Eng., Nagoya Inst. Tech., Aichi, Japan, <sup>2</sup>Center for the Evolutionary Origins of Human Behavior, Kyoto University, Aichi, Japan, <sup>3</sup>OptoBioTechnology Research Center, Aichi, Japan

## Poster Sessions

---

- \*27P-167**     **FTIR study of mutants of primate red and green pigments**  
Sayaka Ohashi<sup>1</sup>, Hiroo Imai<sup>2</sup>, Hideki Kandori<sup>1,3</sup>, Kota Katayama<sup>1,3</sup>  
<sup>1</sup>Grad. Sch. Eng., Nagoya Inst. Tech., Aichi, Japan, <sup>2</sup>Center for the Evolutionary Origins of Human Behavior, Kyoto University, Aichi, Japan, <sup>3</sup>OptoBio Technology Research Center, Aichi, Japan
- \*27P-168**     **Activation mechanism of light-sensitive Gs protein-coupled receptor, jellyfish rhodopsin**  
Shino Inukai<sup>1</sup>, Mitsumasa Koyanagi<sup>2</sup>, Akihisa Terakita<sup>2</sup>, Hideki Kandori<sup>1,3</sup>, Kota Katayama<sup>1,3</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology., <sup>2</sup>Graduate School of Science, Osaka Metropolitan University., <sup>3</sup>OptoBioTechnology Research Center, Nagoya Institute of Technology.
- \*27P-169**     **Spectroscopic analysis of the photoreaction of TAT rhodopsin in the presence of calcium ion**  
Teppei Sugimoto<sup>1</sup>, Kota Katayama<sup>1,2</sup>, Hideki Kandori<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, Japan., <sup>2</sup>Optobio Technology Research Center, Nagoya Institute of Technology, Japan
- 27P-170**     **Free energy profile analysis of natural anion channelrhodopsin GtACR1 in each state of the photocycle**  
Takafumi Shikakura, Cheng Cheng, Shigehiko Hayashi  
Graduate School of Science, Kyoto University, Kyoto, Japan
- 27P-171**     **Production of a light-driven Cl<sup>-</sup>-dependent Na<sup>+</sup> pump: Implications for the binding and transport of distinctive ions**  
Manami Hashimoto<sup>1</sup>, Kano Suzuki<sup>2</sup>, Marie Kurihara<sup>1</sup>, Taiki Nakamura<sup>3</sup>, Keiichi Kojima<sup>4</sup>, Susumu Yoshizawa<sup>5</sup>, Yasuhisa Mizutani<sup>3</sup>, Takeshi Murata<sup>2</sup>, Yuki Sudo<sup>4</sup>  
<sup>1</sup>Grad. Sch., Med. Dent, and Pharm. Sci., Okayama Univ., Okayama, Japan., <sup>2</sup>Grad. Sch. Sci., Univ. Chiba, Chiba, Japan., <sup>3</sup>Grad. Sch. Sci., Univ. Osaka, Osaka, Japan., <sup>4</sup>Fac. of Med. Dent. and Pharm. Sci., Okayama Univ., Okayama, Japan., <sup>5</sup>AORI, Univ. Tokyo, Chiba, Japan.

**Photobiology: Photosynthesis**

- \*27P-172** **Light factor-dependent Growth of Yellow Chlamydomonas**  
Okviyoandra Akhyar<sup>1</sup>, Soichiro Seki<sup>2</sup>, Kazuhiro Yoshida<sup>3</sup>, Chiyo Takagi<sup>4</sup>,  
 Yasuhiro Kamei<sup>4</sup>, Ritsuko Fujii<sup>1,2,3</sup>  
<sup>1</sup>Research Center for Artificial Photosynthesis (ReCAP), Osaka Metropolitan University, Japan, <sup>2</sup>Graduate School of Science, Osaka City University, Japan, <sup>3</sup>Graduate School of Science, Osaka Metropolitan University, Japan, <sup>4</sup>Spectrography and Bioimaging Facility, National Institute for Basic Biology, Okazaki, Japan
- \*27P-173** **Robustness of photosynthetic light-harvesting antenna chlorosome against structural heterogeneity**  
Shun Arai<sup>1</sup>, Tomomi Inagaki<sup>2</sup>, Jiro Harada<sup>3</sup>, Chihiro Azai<sup>4</sup>, Toru Kondo<sup>1</sup>  
<sup>1</sup>Tokyo Institute of Technology, <sup>2</sup>Ritsumeikan University, <sup>3</sup>Kurume University, <sup>4</sup>Chuo University
- \*27P-174** **Energy Transfer Pathway in Chlorophyll-f Containing Photosystem I Revealed by Single-Molecule Spectroscopy**  
Rin Taniguchi<sup>1</sup>, Toshiyuki Shinoda<sup>2</sup>, Tatsuya Tomo<sup>2</sup>, Ye Shen<sup>1</sup>,  
 Yutaka Shibata<sup>1</sup>  
<sup>1</sup>Department of Chemistry, Tohoku University, Miyagi, Japan,, <sup>2</sup>Department of Biology, Tokyo University of Science, Tokyo, Japan
- 27P-175** **Post-translational conversion of amino acids in the O<sub>2</sub>-evolving complex of photosystem II: Formation of carboxylate ligands from aliphatic amino acids**  
Hatsune Mizue<sup>1</sup>, Takehiro Suzuki<sup>2</sup>, Takumi Matsubara<sup>1</sup>,  
 Tomomi Kitajima-Ihara<sup>1</sup>, Minako Hirano<sup>1</sup>, Yuichiro Shimada<sup>1</sup>, Yuki Kato<sup>1</sup>,  
 Naoshi Dohmae<sup>2</sup>, Takumi Noguchi<sup>1</sup>  
<sup>1</sup>Department of Physics, Graduate School of Science, Nagoya University,  
<sup>2</sup>Biomolecular Characterization Unit, RIKEN Center for Sustainable Resource Science
- 27P-176** **Modification of chlorophyll pigments in photosynthetic light-harvesting proteins**  
Yoshitaka Saga, Shota Kawato, Kohei Hamanishi, Moe Sumura  
 Kindai University

# Poster Sessions

## Photobiology: Optogenetics & Optical control

- \*27P-177** **Effect of photoactivated adenylyl cyclase expression in Salmonella**  
Keisuke Sakai, Yusuke V. Morimoto  
Graduate School of Computer Science and Systems Engineering, Kyushu Institute of Technology, Fukuoka, Japan
- \*27P-178** **Novel Optogenetic Strategy for Regulating Insulin Signaling in the Deep Tissues of Living Mice**  
Qi Dong, Mizuki Endo, Takeaki Ozawa  
The University of Tokyo
- 27P-179** **Relationship between Responsiveness of Cardiomyocytes Stimulated by Laser Irradiation and Cell Population Status**  
Takaaki Nishikawa<sup>1</sup>, Furuie Yasumasa<sup>1</sup>, Kentaro Kito<sup>2</sup>, Masahito Hayasi<sup>1,2</sup>, Tomoyuki Kaneko<sup>1,2</sup>  
<sup>1</sup>LaRC, Dept. Frontier Biosci., Hosei Univ., Tokyo, Japan, <sup>2</sup>LaRC, FB, Grad. Sci. & Eng., Hosei Univ, Tokyo, Japan
- 27P-180** **The "fifth" color switch of microbial rhodopsin**  
Rei Abe-Yoshizumi<sup>1</sup>, Hideki Kandori<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. of Eng., Nagoya Inst. of Tech., <sup>2</sup>OptoBioTech. Res. Cent., Nagoya Inst. of Tech.

## Radiobiology & Active oxygen

- 27P-181** **Cell-killing caused by direct and indirect actions of high-LET particles in Boron Neutron Capture Therapy (BNCT)**  
Ryoichi Hirayama<sup>1</sup>, Yu Sanada<sup>2</sup>, Akiko Uzawa<sup>1</sup>, Yoshitaka Matsumoto<sup>3</sup>, Atsushi Ito<sup>4</sup>, Shin-ichiro Masunaga<sup>5</sup>, Hiroki Tanaka<sup>2</sup>, Yoshinori Sakurai<sup>2</sup>, Minoru Suzuki<sup>2</sup>, Sumitaka Hasegawa<sup>1</sup>  
<sup>1</sup>Institute for Quantum Medical Science, National Institutes for Quantum Science and Technology, <sup>2</sup>Institute for Integrated Radiation and Nuclear Science, Kyoto University, <sup>3</sup>Department of Radiation Oncology, Clinical Medicine, Faculty of Medicine, University of Tsukuba, <sup>4</sup>Department of Nuclear Engineering, School of Engineering, Tokai University, <sup>5</sup>BNCT Research Center, Metropolitan University

## Thursday, June 27

### Origin of life & Evolution

**\*27P-182**     **Droplets in PEG / salt solution as primitive compartments at the origin of life**

Yota Tabata, Masahito Hayashi, Tomoyuki Kaneko

LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ., Tokyo, Japan

**\*27P-183**     **Adaptive Laboratory Evolution of Minimal Genome Bacterium to Low Temperature**

Masaki Mizutani<sup>1</sup>, Minoru Moriyama<sup>1</sup>, Ryuichi Koga<sup>1</sup>, Takema Fukatsu<sup>1,2,3</sup>, Shigeyuki Kakizawa<sup>1</sup>

<sup>1</sup>Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, <sup>2</sup>Department of Biological Sciences, The University of Tokyo, Japan, <sup>3</sup>Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan

**\*27P-184**     **Stability, structure, and interactions of prebiotic fatty acid membranes**

Taren Elizabeth Buddle Ginter<sup>1,2</sup>, Akiko Baba<sup>3</sup>, Masayuki Imai<sup>3</sup>, Maikel Rheinstädter<sup>4,5</sup>, Kosuke Fujishima<sup>1,6</sup>

<sup>1</sup>Earth-Life Science Institute, Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>School of Life Science and Technology, Tokyo Institute of Technology, Tokyo, Japan, <sup>3</sup>Department of Physics, Tohoku University, Sendai, Japan, <sup>4</sup>Department of Physics and Astronomy, McMaster University, Hamilton, Canada, <sup>5</sup>Origins Institute, McMaster University, Hamilton, Canada, <sup>6</sup>Graduate School of Media and Governance, Keio University, Fujisawa, Japan

### Synthetic biology & Artificial cells

**\*27P-185**     **Induction of Dynamic Formation of ATPS-based membrane-less Artificial Cell Compartment by Thermal Control**

Mirai Sasaki, Yoshihiro Minagawa, Hiroyuki Noji

Department of Applied Chemistry, The University of Tokyo, Tokyo, Japan

## Poster Sessions

---

- \*27P-186** **Microtubule/kinesin complexes spontaneously emerge vortices in cell-sized droplet generated by water/water phase separation**  
Hiroki Sakuta<sup>1,2</sup>, Naoki Nakatani<sup>3</sup>, Takayuki Torisawa<sup>4</sup>, Yutaka Sumino<sup>5</sup>, Kanta Tsumoto<sup>6</sup>, Kazuhiro Oiwa<sup>7,8</sup>, Kenichi Yoshikawa<sup>3</sup>  
<sup>1</sup>Universal Biology Institute, University of Tokyo, <sup>2</sup>Graduate School of Arts and Sciences, University of Tokyo, <sup>3</sup>Faculty of Life and Medical Sciences, Doshisha University, <sup>4</sup>Cell Architecture Laboratory, National Institute of Genetics, <sup>5</sup>Department of Applied Physics, Faculty of Advanced Engineering Tokyo University of Science, <sup>6</sup>Graduate School of Engineering, Mie University, <sup>7</sup>Advanced ICT Research Institute, National Institute of Information and Communications Technology, <sup>8</sup>Graduate School of Science, University of Hyogo
- \*27P-187** **Regulation of Stochastic Cell Re-differentiation Ratio of Genetic Toggle Switch with Minute Expression Balancing Control of Repressor Proteins**  
Sota Okuda, Kohei Uetsuka, Masaki Takeda, Daisuke Kiga  
School of Electrical Engineering and Bioscience, Department of Advanced Science and Engineering, Waseda University, Tokyo, Japan
- \*27P-188** **Zombie cells produced from the minimal synthetic bacterium JCVI-syn3B**  
Nanase Oda<sup>1</sup>, Hana Kiyama<sup>1</sup>, Makoto Miyata<sup>1,2</sup>  
<sup>1</sup>Graduate School Science, Osaka Metropolitan University, Japan, <sup>2</sup>The OMU Advanced Research Institute for Natural Science and Technology, Osaka Metropolitan Univ., Japan
- \*27P-189** **Large coiled-coil protein of *Mycoplasma pneumoniae* induces morphological changes in a minimal synthetic bacterium by inhibiting septum formation**  
Muhammad Algiffari<sup>1</sup>, Hana Kiyama<sup>1</sup>, Daisuke Nakane<sup>2</sup>, Tsuyoshi Kenri<sup>3</sup>, Makoto Miyata<sup>1,4</sup>  
<sup>1</sup>Graduate School of Science, Osaka Metropolitan University, Osaka, Japan, <sup>2</sup>Graduate School of Informatics and Engineering, Electro-Communications University, Tokyo, Japan, <sup>3</sup>Department of Bacteriology II, National Institute of Infectious Diseases, Tokyo, Japan, <sup>4</sup>The OMU Advanced Research Institute for Natural Science and Technology, Osaka Metropolitan University, Osaka, Japan
- 27P-190** **Efficient Proliferation of Synthetic Minimal Cells with Low Energy Costs**  
Ken Takagi, Minoru Kurisu, Toshihiro Kawakatsu, Masayuki Imai  
Department of Physics, Tohoku University, Sendai, Japan



**Computational biology: Bioinformatics**

- \*27P-191** Elucidation of mechanistic details of copper chaperoning to Superoxide Dismutase (SOD) using a novel free-energy computation technique and cross-validated with Molecular Dynamics Simulations

Sharayu Umakant Ghodeswar, Debashree Bandyopadhyay

Birla Institute of Technology and Science, Pilani - Hyderabad Campus, Telangana, India

- 27P-192** Computational analysis of OPRD1-OPRM1 heterodimer ligands

Ryota Takishima<sup>1</sup>, Aoi Fukushima<sup>1</sup>, Wataru Nemoto<sup>1,2</sup>

<sup>1</sup>Grad. Sci. & Eng., Tokyo Denki Univ., Saitama, Japan, <sup>2</sup>Dept. Sci & Eng., Tokyo Denki Univ., Saitama, Japan

**Computational biology: Molecular simulation**

- \*27P-193** A Gradient-Based Approach for Optimizing Molecular Structures using Atomic Force Microscopy Images and Normal Mode Analysis

Xuan Wu<sup>1</sup>, Osamu Miyashita<sup>2</sup>, Florence Tama<sup>1,2,3</sup>

<sup>1</sup>Department of Physics, Nagoya University, <sup>2</sup>RIKEN Center for Computational Science, <sup>3</sup>Institute of Transformative Bio-Molecules, Nagoya University

- \*27P-194** PINning down the elevator-type mechanism of auxin transport

Lorena Zuzic<sup>1</sup>, Bjørn Panyella Pedersen<sup>2</sup>, Birgit Schiøtt<sup>1</sup>

<sup>1</sup>Department of Chemistry, Aarhus University, Aarhus, Denmark, <sup>2</sup>Department of Molecular Biology and Genetics, Aarhus University, Aarhus, Denmark

- \*27P-195** The Effect of Tricaprylin Surface on The Lid Region Dynamics of *Candida antarctica* Lipase B

Tegar Nurwahyu Wijaya<sup>1,2</sup>, Akio Kitao<sup>1</sup>

<sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, Tokyo, Japan, <sup>2</sup>Department of Chemistry, Universitas Pertamina, Jakarta, Indonesia

- \*27P-196** Development of drug discovery platform technology based on a generalized-ensemble simulation method -Evaluation of SARS CoV-2 PLpro candidate inhibitors-

Masashi Muramoto<sup>1</sup>, Suzuka Saitou<sup>1</sup>, Simon Hikiri<sup>2</sup>, Junichi Higo<sup>3</sup>, Takuya Takahashi<sup>2</sup>

<sup>1</sup>Graduate School of Life Sciences, Ritsumeikan University, Kusatsu, Japan., <sup>2</sup>College of Life Sciences, Ritsumeikan University, Kusatsu, Japan., <sup>3</sup>Graduate School of Information Science, University of Hyogo, Kobe, Japan.

## Poster Sessions

---

**\*27P-197 Unraveling the Catalytic Mechanism of EPS1 in Salicylic Acid Biosynthesis Using Computational Modeling**

Tianjie Li, Yi Wang

The Chinese University of Hong Kong

**\*27P-198 Complementary Analysis between 4D Crystallography and Extensive MD Simulation Captures Transient IF1-Ribosome Dynamics in Translation Initiation**

Shun Yokoi<sup>1,2,3</sup>, Ilkin Yapici<sup>4</sup>, E. Han Dao<sup>5</sup>, Ebru Destan<sup>4</sup>, Esra Ayan<sup>4</sup>, Alaleh Shafei<sup>4</sup>, Fatma Betul Ertem<sup>4</sup>, Cahine Kulakman<sup>4</sup>, Merve Yilmaz<sup>4</sup>, Bilge Tosun<sup>4</sup>, Halilibrahim Ciftci<sup>4,6,7</sup>, Abdullah Kepceoglu<sup>2,3,4</sup>, Jerome Johnson<sup>4</sup>, Omur Guven<sup>4</sup>, Ali Ergul<sup>4,8</sup>, Brandon Hayes<sup>9</sup>, Yashas Rao<sup>9</sup>, Christopher Kupitz<sup>9</sup>, Frederic P. Poitevin<sup>9</sup>, Mengling Liang<sup>9</sup>, Mark S. Hunter<sup>9</sup>, Pohl Milon<sup>10</sup>, Raymond G. Sierra<sup>9</sup>, Ayori Mitsutake<sup>1</sup>, Soichi Wakatsuki<sup>2,3</sup>, Hasan DeMirci<sup>4,5</sup>

<sup>1</sup>Department of Physics, School of Science and Technology, Meiji University, Kanagawa Japan, <sup>2</sup>Biological Sciences Division, SLAC National Accelerator Laboratory, CA, USA, <sup>3</sup>Department of Structural Biology, Stanford University, CA, USA, <sup>4</sup>Department of Molecular Biology and Genetics, Koc University, Istanbul, Türkiye, <sup>5</sup>Stanford PULSE Institute, SLAC National Laboratory, CA, USA, <sup>6</sup>Medicinal and Biological Chemistry Science Farm Joint Research Laboratory, Faculty of Life Sciences, Kumamoto University, Kumamoto, Japan, <sup>7</sup>Department of Drug Discovery, Science Farm Ltd., Kumamoto, Japan, <sup>8</sup>Department of Molecular Biology and Genetics, Bogazici University, Istanbul, Türkiye, <sup>9</sup>Linac Coherent Light Source, SLAC National Laboratory, CA, USA, <sup>10</sup>Biomolecules Laboratory, Faculty of Health Sciences. Universidad Peruana de Ciencias Aplicadas, Lima, Peru

**\*27P-199 The Regulatory Role of p53 C-Terminal Domain Acetylation in Modulating the Dynamics of SIR2's NAD<sup>+</sup> Binding Pocket**

Zhen Bai, Tatsuhiro Kimizono, Akio Kitao

Tokyo Institute of Technology

**\*27P-200 An Open Source de novo Drug Design Workflow with Active Learning and Enamine REAL**

Ben Cree

Newcastle University

# Thursday, June 27

- \*27P-201** **Studying the role of protonation in the (de)activation mechanism of class A GPCRs**  
João Vitorino<sup>1</sup>, Carlos Barreto<sup>2</sup>, Irina Moreira<sup>2,3</sup>, Miguel Machuqueiro<sup>1</sup>  
<sup>1</sup>BiolSI: Biosystems and Integrative Sciences Institute, Faculdade de Ciências, Universidade de Lisboa, Portugal, <sup>2</sup>Center for Neuroscience and Cell Biology, Center for Innovative Biomedicine and Biotechnology, University of Coimbra, Portugal, <sup>3</sup>Department of Life Sciences, University of Coimbra, Portugal
- \*27P-202** **Molecular Dynamics simulation of the complex of the multiple distinctive structural regions in the WNV envelope and human monoclonal antibody.**  
Masahito Yoshikawa<sup>1</sup>, Hideyuki Masaki<sup>1,2</sup>, Ryuuichi Kato<sup>3</sup>,  
 Tatsuhiro Ozawa<sup>4</sup>, Naoyuki Miyashita<sup>1,2</sup>  
<sup>1</sup>Department of Biological System Engineering, Graduate School of Biology-Oriented Science and Technology, KINDAI University, <sup>2</sup>Department of Computational Systems Biology, Faculty of Biology-Oriented Science and Technology, KINDAI University, <sup>3</sup>Structural Biology Research Center, Photon Factory, Institute of Materials Structure Science, High Energy Accelerator Research Organization (KEK), Ibaraki, Japan., <sup>4</sup>Department of Immunology, Faculty of Medicine, Academic Assembly, University of Toyama, Toyama, Japan
- \*27P-203** **Identifying and Characterizing Ligands for Mutant p53 as Potential Breast Cancer Therapy**  
Rifqa Fikriya Rahasri, Kazutomo Kawaguchi, Hidemi Nagao  
 Kanazawa University
- \*27P-204** **Molecular Docking, Molecular Dynamics, And MM-PBSA Analysis of Quinolone Antibiotics Against FmtA of Staphylococcus aureus**  
Citra Hasanah, Hidemi Nagao, Kazutomo Kawaguchi  
 Graduate School of Natural Science and Technology, Kanazawa University
- \*27P-205** **Computational analysis on binding structure of limonin to a bitter taste receptor TAS2R38**  
Masamune Kashihara<sup>1</sup>, Daiki Hayashi<sup>1</sup>, Shigenori Tanaka<sup>2</sup>, Yoshiko Aihara<sup>1</sup>  
<sup>1</sup>Graduate School of Agricultural Science, Kobe University, Kobe, Japan, <sup>2</sup>Graduate School of System Informatics, Kobe University, Kobe, Japan
- 27P-206** **Molecular Dynamics Study of the Unfolding Processes of Proteins with Highly Similar Native Structure**  
Souta Kadowaki, Takashi Yoshidome  
 Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan

## Poster Sessions

---

- 27P-207**     **Dynamic structure analysis of superoxide dismutase 1 protein upon Cys111 oxidation using molecular dynamics simulation**  
Yuta Hori<sup>1</sup>, Ayaka Sato<sup>2</sup>, Kowit Hengphasatporn<sup>1</sup>, Yasuteru Shigeta<sup>1</sup>  
<sup>1</sup>Center for Computational Sciences, University of Tsukuba, <sup>2</sup>Degree Programs in Pure and Applied Sciences, Graduate School of Science and Technology, University of Tsukuba
- 27P-208**     **Investigation of the effect of the 2-OH group of in Arabidopsis thaliana ceramide on plant cell membranes using MD simulation**  
Tsujii Keigo<sup>1</sup>, Minoru Nagano<sup>2</sup>, Simon Hikiri<sup>2</sup>, Takuya Takahashi<sup>2</sup>  
<sup>1</sup>Graduate School of Life Sciences, Ritsumeikan University, Kusatsu, Japan, <sup>2</sup>College of Life Sciences, Ritsumeikan University, Kusatsu, Japan
- 27P-209**     **Dynamin-1 membrane tubule constriction mechanism revealed by coarse-grained MD simulations**  
MD. Iqbal Iqbal Mahmood<sup>2</sup>, Shintaroh Kubo<sup>1</sup>, Kei-ichi Okazaki<sup>2</sup>  
<sup>1</sup>Graduate School of Medicine, The University of Tokyo, Japan., <sup>2</sup>Research Center for Computational Science, Institute for Molecular Science, National Institutes of Natural Sciences, Okazaki, 444-8585, Japan.
- 27P-210**     **Heterogeneous organization in phase-separated transcription factors: Residue-level molecular simulations**  
Azuki Mizutani<sup>1</sup>, Cheng Tan<sup>2</sup>, Yuji Sugita<sup>2</sup>, Shoji Takada<sup>1</sup>  
<sup>1</sup>Grad. Sch. Of Science, Kyoto Univ., Kyoto, Japan, <sup>2</sup>RIKEN Compute. Sci., Kobe, Japan
- 27P-211**     **Molecular dynamics simulation of the PWW domain of LEDGF protein and histone tail H3K36**  
Hinako Suzuki<sup>1,3</sup>, Itoh Satoru<sup>2,3,4</sup>, Hisashi Okumura<sup>2,3,4</sup>  
<sup>1</sup>Shinshu University, <sup>2</sup>Exploratory Research Center on Life and Living Systems, <sup>3</sup>Institute for Molecular Science, <sup>4</sup>Graduate University for Advanced Studies
- 27P-212**     **MD-based in silico screening using supercomputer Fugaku**  
Tomoya Nabetani<sup>1</sup>, Toru Ekimoto<sup>1</sup>, Tsutomu Yamane<sup>2</sup>, Mitsunori Ikeguchi<sup>1,2</sup>  
<sup>1</sup>Graduate School of Medical Life Science, Yokohama City University, <sup>2</sup>RIKEN Center for Computational Science, RIKEN
- 27P-213**     **Effects of sodium ions on conformational changes of the adenosine A2A receptor by molecular simulations**  
Akihiro Arisawa, Ayori Mitsutake  
Meiji University, School of Science and Technology

**Thursday, June 27**

- 27P-214**      **Optimal transport maps for targeted free energy estimation**  
Tsuyoshi Kawai, Yasuhiro Matsunaga  
 Graduate School of Science and Engineering, Saitama University, Saitama, Japan
- 27P-215**      **Surface oleophilicity induced by UV-hydroxylation of titanium**  
Gehoon Chung<sup>1,2</sup>, Wonjoon Moon<sup>1,2</sup>, Byeong-Min Lee<sup>1,2</sup>, Shin Hye Chung<sup>1,2</sup>  
<sup>1</sup>Seoul National University School of Dentistry, <sup>2</sup>Seoul National University Dental Research Institute

**Computational biology: Biological modeling and simulation**

- \*27P-216**      **Looking for non-opioid analgesics using stochastic titration CpHMD with AMBER14SB**  
João G. N. Sequeira<sup>1</sup>, Adrian E. Roitberg<sup>2</sup>, Miguel Machuqueiro<sup>1</sup>  
<sup>1</sup>BioISI: Biosystems and Integrative Sciences Institute, 1749-016 Lisboa, Portugal, <sup>2</sup>Department of Chemistry, University of Florida, Gainesville 32603, USA
- \*27P-217**      **Prediction of cross-fitness for adaptive evolution to different environmental conditions: Consequence of phenotypic dimensional reduction.**  
Takuya Sato<sup>1</sup>, Chikara Furusawa<sup>1,2</sup>, Kunihiko Kaneko<sup>3</sup>  
<sup>1</sup>BDR, RIKEN, <sup>2</sup>Universal Biology Institute, Graduate school of Science, The University of Tokyo, <sup>3</sup>The Niels Bohr Institute, University of Copenhagen, Copenhagen, Denmark.
- \*27P-218**      **Theoretical model of cell shape control by cytoskeleton**  
Vivek Semwal<sup>1</sup>, Biplab Bhattacharjee<sup>1</sup>, Michiko Takeda<sup>2</sup>, Yu-Chiun Wang<sup>2</sup>, Tatsuo Shibata<sup>1</sup>  
<sup>1</sup>Laboratory for Physical Biology, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, <sup>2</sup>Laboratory for Epithelial Morphogenesis, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan
- \*27P-219**      **Universally conserved Mg-pinch motif in NTP processing enzymes**  
Balint Dudas, Denes Berta, Edina Rosta  
 Department of Physics and Astronomy, University College London (UCL), United Kingdom
- \*27P-220**      **A binding site for phosphoinositide modulation of voltage gated sodium channels described by multiscale simulations**  
Yiechang Lin, Elaine Tao, James Champion, Ben Corry  
 Australian National University

## Poster Sessions

---

- 27P-221**      **Development of an Efficient Estimation Method for Maximum Tolerated Dose by Reinforcement Learning**  
Ryosuke Takami<sup>1</sup>, Koji Tabata<sup>1,3</sup>, Yayoi Wada<sup>2</sup>, Masahiro Sonoshita<sup>2</sup>, Tamiki Komatsuzaki<sup>1,3,4,5</sup>  
<sup>1</sup>Research Institute for Electronic Science, Hokkaido University, Sapporo, Japan, <sup>2</sup>Division of Biomedical Oncology, Institute for Genetic Medicine, Hokkaido University, Sapporo, Japan, <sup>3</sup>Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University, Sapporo, Japan, <sup>4</sup>The Institute of Scientific and Industrial Research, Osaka University, <sup>5</sup>Institute for Open and Transdisciplinary Research Initiatives, Osaka University
- \*27P-222**      **Study of the Allosteric Mechanism of Human Mitochondrial Phenylalanyl-tRNA Synthetase by Transfer Entropy via an Improved Gaussian Network Model and Co-evolution Analyses**  
Zhongjie Han<sup>1,2,3</sup>, Chunhua Li<sup>3</sup>  
<sup>1</sup>Center for Quantitative Biology, Academy for Advanced Interdisciplinary Studies, Peking University, Beijing, China, <sup>2</sup>Peking-Tsinghua Center for Life Sciences, Academy for Advanced Interdisciplinary Studies, Peking University, Beijing, China, <sup>3</sup>Faculty of Environmental and Life Sciences, Beijing University of Technology, Beijing, China
- 27P-223**      **Nucleosome-resolution modeling and simulation of singlegene level chromatin organization mechanisms**  
Gu Chenyang, Shoji Takada, Giovanni Brandani  
Grad. Sch. Sci., Kyoto university, Kyoto, Japan
- 27P-224**      **Allosteric drugs: new principles and design approaches**  
Wei-Ven Tee<sup>1</sup>, Igor N Berezovsky<sup>1,2</sup>  
<sup>1</sup>Bioinformatics Institute (BI), Agency for Science, Technology and Research (A\*STAR), 30 Biopolis Street, #07-01, Matrix, Singapore 138671, <sup>2</sup>Department of Biological Sciences (DBS), National University of Singapore (NUS), 8 Medical Drive, 117579, Singapore
- 27P-225**      **Study of Liquid–liquid Phase Separation of Tau fragment K18 via Coarse-grained Simulation**  
Zhuqing Zhang, Qinglin Yan  
College of Life Sciences, University of Chinese Academy of Sciences, Beijing 100049, China

**Thursday, June 27****\*27P-226 Design principles of microtubule-associated proteins: exploring the role of lever arms and linker regions under directional loads**

Ilya B. Kovalenko<sup>1</sup>, Vladimir A. Fedorov<sup>1</sup>, Ekaterina G. Kholina<sup>1</sup>, Philipp S. Orekhov<sup>3</sup>, Egor M. Pozdnyakov<sup>1</sup>, Fazoil I. Ataulakhanov<sup>2,4</sup>, Nikita Gudimchuk<sup>1,2</sup>

<sup>1</sup>Lomonosov Moscow State University, Moscow, Russia, <sup>2</sup>Center for Theoretical Problems of Physico-Chemical Pharmacology, Russian Academy of Sciences, Moscow, Russia, <sup>3</sup>Shenzhen MSU-BIT University, Shenzhen, China, <sup>4</sup>University of Pennsylvania, Philadelphia, PA, USA

**Computational biology: machine learning for molecules or cell systems****\*27P-227 A Machine Learning Approach to Classify Force Curves of Nuclear Elasticity Measurements.**

MD Fahim Newaz

Division of Nano Life Science, Kanazawa University, Kanazawa 920-1192, Japan

**\*27P-228 Development of an Efficient Estimation Method for Maximum Tolerated Dose by Reinforcement Learning**

Ryosuke Takami<sup>1</sup>, Koji Tabata<sup>1</sup>, Yayoi Wada<sup>2</sup>, Masahiro Sonoshita<sup>2</sup>, Tamiki Komatsuzaki<sup>1</sup>

<sup>1</sup>Research Institute for Electronic Science, Hokkaido University, Sapporo, Japan, <sup>2</sup>Division of Biomedical Oncology, Institute for Genetic Medicine, Hokkaido University, Sapporo, Japan

**\*27P-229 RVINN: Inference of gene regulation dynamics in the mRNA life cycle using Physics-Informed Neural Networks**

Osamu Muto<sup>1,2</sup>, Zhongliang Guo<sup>2</sup>, Rui Yamaguchi<sup>1,2</sup>

<sup>1</sup>Nagoya University, <sup>2</sup>Aichi Cancer Center Research Institute

**Mathematical & Theoretical biology****\*27P-230 Active thermodynamic force drives mitochondrial equidistant distribution in axons**

Masashi K. Kajita<sup>1</sup>, Yoshiyuki Konishi<sup>1</sup>, Tetsuhiro Hatakeyama<sup>2,3</sup>

<sup>1</sup>Department of Applied Chemistry and Biotechnology, Faculty of Engineering, University of Fukui, Fukui, Japan, <sup>2</sup>Department of Basic Science, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Earth Life Science Institute (ELSI), Tokyo Institute of Technology, Tokyo, Japan

# Poster Sessions

---

---

- \*27P-231**      **Global propagation of single-gene deletion effects through stoichiometry conservation relations**  
Genta Chiba<sup>1</sup>, Ken-ichiro F. Kamei<sup>1</sup>, Arisa Oda<sup>1,2</sup>, Kunihiro Ohta<sup>1,2,3</sup>, Yuichi Wakamoto<sup>1,2,3</sup>  
<sup>1</sup>Grad. Sch. Arts and Sci. Univ. Tokyo, Tokyo, Japan, <sup>2</sup>Res. Cent. Complex Syst. Biol., Univ. Tokyo, Tokyo, Japan, <sup>3</sup>UBI, Univ. Tokyo, Tokyo, Japan
- \*27P-232**      **Pattern propagation driven by surface curvature**  
Ryosuke Nishide, Shuji Ishihara  
The University of Tokyo
- 27P-233**      **Entangled gene regulatory networks with cooperative expression endow responses to unforeseen environmental changes**  
Masayo Inoue  
Graduate School of Engineering, Kyushu Institute of Technology

## Nonequilibrium state & Biological rhythm

- \*27P-234**      **Exploring dense active dynamics in suspension of ciliate Tetrahymena based on all cell tracking**  
Kohei Okuyama, Masatoshi Ichikawa  
Department of Physics, Kyoto University
- 27P-235**      **Emergence of spontaneous oscillations in a liquid film of bacterial swimmers**  
Lei-Han Tang  
Hong Kong Baptist University, Hong Kong, China

## Measurements

- \*27P-236**      **Single EVs detection and analysis using a glass nanopore**  
Izumi Shibayama, Kohei Hayashi, Ryuji Kawano  
Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology



**Thursday, June 27****\*27P-237 Ultra-low-noise and wide-bandwidth current detection for enhanced scanning ion conductance imaging rate in scanning ion conductance microscopy**Shoma Kamei<sup>1</sup>, Shinji Watanabe<sup>2</sup><sup>1</sup>Division of Nano Life Science, Graduate School of Frontier Science Initiative, Kanazawa University, <sup>2</sup>WPI Nano Life Science Institute(WPI-NanoLSI), Kanazawa University**27P-238 Aptamer-based AI-driven nanopore measurement for the simultaneous detection of biomarkers for the cancer diagnosis**

Ryo Akita, Lysenko Artem, Shunsuke Ono, Hikaru Nozawa, Tatsuhiko Tsunoda, Sotaro Uemura

Graduate School of Science, The University of Tokyo

**27P-239 Analysis of the conformational dynamics of oligosaccharides using ion mobility spectrometry**Hao Feng<sup>1</sup>, Takumi Yamaguchi<sup>1,2,3</sup><sup>1</sup>School of Materials Science, Japan Advanced Institute of Science and Technology, <sup>2</sup>Graduate School of Pharmaceutical Sciences, Nagoya City University, <sup>3</sup>Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences**Bioimaging****\*27P-240 A bright and highly-response Ca<sup>2+</sup> biosensor based on mScarlet: Progress toward fluorescence lifetime imaging**Shosei Imai<sup>1</sup>, Ryan Fink<sup>2</sup>, Takuya Terai<sup>1</sup>, Olivia A. Masseck<sup>2</sup>, Robert E. Campbell<sup>1</sup><sup>1</sup>Department of Chemistry, Graduate School of Science, The University of Tokyo, Tokyo, Japan., <sup>2</sup>Synthetic Biology, University of Bremen, Bremen, Germany.**\*27P-241 Hydroxyquinoline-derived Multifunctional Small Molecule Turn-On Fluorescent Probe as a Theranostic Agent for Alzheimer's Disease**

Priyam Ghosh, Parameswar Iyer

Department of Chemistry, Indian Institute of Technology Guwahati, Guwahati, Assam 781039, India

## Poster Sessions

---

**\*27P-242 Precision-enhanced 1,000-fold faster 3D quantum thermometry in vivo**

Yurina Nakane<sup>1</sup>, Haruka Maeoka<sup>1</sup>, Ryuki Imamura<sup>1</sup>, Ryuji Igarashi<sup>2</sup>, Shin Usuki<sup>3</sup>, Takuma Sugi<sup>1</sup>

<sup>1</sup>Program of Biomedical Science, Graduate School of Integrated Sciences for Life, Hiroshima University, Japan, <sup>2</sup>Quantum Science and Technology Organization, Japan, <sup>3</sup>Research Institute of Electronics, Shizuoka University, Japan

**\*27P-243 Elucidation of neuronal differentiation mechanisms by thermal signaling through control of intracellular local temperature**

Shunsuke Chuma<sup>1,2</sup>, Kohki Okabe<sup>3,4</sup>, Yoshie Harada<sup>2,5,6</sup>

<sup>1</sup>Department of Biological Sciences, Graduate School of Science, Osaka University, Osaka, Japan, <sup>2</sup>Institute for Protein Research, Osaka University, Osaka, Japan, <sup>3</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Japan Science and Technology Agency, Precursory Research for Embryonic Science and Technology, Saitama, Japan, <sup>5</sup>Center for Quantum Information and Quantum Biology, Osaka University, Osaka, Japan, <sup>6</sup>Premium Research Institute for Human Metaverse Medicine (WPI-PRIME), Osaka University, Osaka, Japan

**\*27P-244 Imaging and modeling of glycolytic oscillations**

Saaya Hario<sup>1</sup>, Shosei Imai<sup>1</sup>, Yudai Iyoda<sup>2</sup>, Hikaru Sugimoto<sup>3</sup>, Takuya Terai<sup>1</sup>, Shinya Kuroda<sup>4</sup>, Robert E. Campbell<sup>1</sup>

<sup>1</sup>Department of Chemistry, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Department of Bioinformatics and Systems Biology, Faculty of Science, University of Tokyo, Tokyo, Japan, <sup>3</sup>Department of Biochemistry and Molecular Biology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Department of Biological Sciences, Graduate School of Science, University of Tokyo, Tokyo, Japan

# Thursday, June 27

## **\*27P-245** Development of selective plane activation structured illumination microscopy

Kenta Temma<sup>1,2,9</sup>, Ryosuke Oketani<sup>1,3</sup>, Toshiki Kubo<sup>1</sup>, Kazuki Bando<sup>1</sup>, Shunsuke Maeda<sup>1</sup>, Kazunori Sugiura<sup>4</sup>, Tomoki Matsuda<sup>4</sup>, Rainer Heintzmann<sup>5,6</sup>, Tatsuya Kaminishi<sup>7,9</sup>, Koki Fukuda<sup>8,9</sup>, Maho Hamasaki<sup>7,8</sup>, Takeharu Nagai<sup>4</sup>, Katsumasa Fujita<sup>1,2,9</sup>

<sup>1</sup>Department of Applied Physics, Osaka University, <sup>2</sup>AIST Advanced Photo-BIO OIL, AIST-Osaka University, <sup>3</sup>Department of Chemistry, Kyushu University, <sup>4</sup>SANKEN, Osaka University, <sup>5</sup>Leibniz Institute of Photonic Technology, <sup>6</sup>Institute of Physical Chemistry and Abbe Center of Photonics, Friedrich-Schiller University Jena, <sup>7</sup>Department of Genetics, Graduate School of Medicine, Osaka University, <sup>8</sup>Laboratory of Intracellular Membrane Dynamics, Graduate School of Frontier Biosciences, Osaka University, <sup>9</sup>Institute for Open and Transdisciplinary Research Initiatives, Osaka University

## **\*27P-246** High-speed, high-resolution computational phase microscopy visualizing organelles

Yugo Inutsuka<sup>1,2</sup>, Yasushi Okada<sup>1,2</sup>

<sup>1</sup>The University of Tokyo, <sup>2</sup>RIKEN

## **27P-247** Extraction of dependent spatial or spectral features from different disease states in Raman images

Ryoya Kondo<sup>1</sup>, Yuta Mizuno<sup>1,2,3</sup>, Jean-Emmanuel Clement<sup>2,3</sup>, Kentaro Mochizuki<sup>4</sup>, Katsumasa Fujita<sup>5</sup>, Yoshinori Harada<sup>4</sup>, Tamiki Komatsuzaki<sup>1,2,3</sup>

<sup>1</sup>Grad. Sch. Chem. Sci. Eng., Hokkaido Univ., Sapporo, Japan, <sup>2</sup>Res. Inst. Electron. Sci., Hokkaido Univ., Sapporo, Japan, <sup>3</sup>WPI-ICReDD, Hokkaido Univ., Sapporo, Japan, <sup>4</sup>Kyoto Pref. Univ. Med., Kyoto Japan, <sup>5</sup>Grad. Sch. Eng., Osaka Univ., Suita, Japan

## **\*27P-248** Quantification of Spatial and Spectral Information Dependent on Measurement Methods and Disease States in Raman Images

Ryoya Kondo<sup>1</sup>, Yuta Mizuno<sup>1,2,3</sup>, Jean-Emmanuel Clement<sup>2,3</sup>, Kentaro Mochizuki<sup>4</sup>, Katsumasa Fujita<sup>5</sup>, Yoshinori Harada<sup>4</sup>, Tamiki Komatsuzaki<sup>1,2,3</sup>

<sup>1</sup>Grad. Sch. Chem. Sci. Eng., Hokkaido Univ., <sup>2</sup>Res. Inst. Electron. Sci., Hokkaido Univ., <sup>3</sup>WPI-ICReDD, Hokkaido Univ., <sup>4</sup>Kyoto Pref. Univ. Med., <sup>5</sup>Grad. Sch. Eng., Osaka Univ.

## Poster Sessions

---

- 27P-249** Simultaneous measurement of average size and number of biomolecular condensates using spatial image correlation spectroscopy (SICS)  
Yuta Hamada<sup>1</sup>, Akita Kitamura<sup>2,3</sup>  
<sup>1</sup>Graduate School of Life Science, Hokkaido University, Sapporo, Japan, <sup>2</sup>Faculty of Advanced Life Science, Hokkaido University, Sapporo, Japan, <sup>3</sup>PRIME, AMED, Tokyo, Japan
- 27P-250** Imaging of Biomolecules by Constant Thermal Fluctuation Mode Atomic Force Microscopy  
Daisuke Yamamoto  
Faculty of Science, Fukuoka University
- 27P-251** Development of small nanodiamonds that can be observed by optically detected magnetic resonance inside cells.  
Hirotaka Okita<sup>1</sup>, Shingo Sotoma<sup>2</sup>, Yuki S Kato<sup>3</sup>, Yukiho Shimazaki<sup>1,4</sup>, Hiroshi Abe<sup>5</sup>, Seiichi Saiki<sup>5</sup>, Madoka Suzuki<sup>1</sup>, Yoshie Harada<sup>1,5,6</sup>  
<sup>1</sup>Institute for Protein Research Osaka University, <sup>2</sup>Faculty of Molecular Chemistry and Engineering Kyoto Institute of Technology, <sup>3</sup>Department of Biological Sciences, School of Science, Osaka University, <sup>4</sup>Graduate school of Science Osaka University, <sup>5</sup>Center for Quantum Information and Quantum Biology Osaka University, <sup>6</sup>Premium Research Institute for Human Metaverse Medicine, Osaka University
- 27P-252** Volumetric imaging of micrometer-scale cellular dynamics in centimeter-scale multicellular systems  
Taro Ichimura<sup>1</sup>, Taishi Kakizuka<sup>2</sup>, Keiko Itano<sup>2</sup>, Kaoru Seiriki<sup>3</sup>, Hitoshi Hashimoto<sup>1,3</sup>, Yuki Sato<sup>4</sup>, Hiroya Itoga<sup>5</sup>, Shuichi Onami<sup>1,5</sup>, Takeharu Nagai<sup>1,2</sup>  
<sup>1</sup>Institute for Open and Transdisciplinary Research Initiatives, Osaka University, Japan, <sup>2</sup>The Institute of Scientific and Industrial Research (SANKEN), Osaka University, Japan, <sup>3</sup>Graduate School of Pharmaceutical Sciences, Osaka University, Japan, <sup>4</sup>Department of Anatomy and Cell Biology, Graduate School of Medical Sciences, Kyushu University, Japan, <sup>5</sup>RIKEN Center for Biosystems Dynamics Research, Kobe, Japan
- 27P-253** Multi-color fluorescence lifetime biosensors for quantifying Ca<sup>2+</sup>, ATP, and GTP/GDP ratio in live cells  
Cong Quang Vu  
WPI-NanoLSI, Kanazawa University

**Bioengineering**

- \*27P-254** **Cell-free synthesis of hydrophobic peptides that form nanopores in bilayer lipid membranes**  
 Shoko Fujita<sup>1</sup>, Izuru Kawamura<sup>2</sup>, Ryuji Kawano<sup>1</sup>  
<sup>1</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Tokyo, Japan, <sup>2</sup>Graduate School of Engineering Science, Yokohama National University, Yokohama, Japan
- 27P-255** **Morphological Difference in Hydrogel Induced Cancer Stem Cell in Synovial Sarcoma Model Cells**  
 Zannatul Ferdous<sup>1</sup>, Jean-Emmanuel Clément<sup>1</sup>, Jian Ping Gong<sup>1,3</sup>, Shinya Tanaka<sup>1,2</sup>, Masumi Tsuda<sup>1,2,3</sup>, Tamiki Komatsuzaki<sup>1,4</sup>  
<sup>1</sup>Institute for Chemical Reaction, Design and Discovery (WPI-ICReDD), Hokkaido University, <sup>2</sup>Department of Cancer Pathology, Faculty of Medicine, Hokkaido University, <sup>3</sup>Faculty of Advanced Life Science, Hokkaido University, <sup>4</sup>Graduate School of Chemical Sciences and Engineering, Hokkaido University
- \*27P-256** **Novel approach for anticancer peptides carried by nanoparticles**  
 Roberta Moisa  
 Horia Hulubei National Institute for Physics and Nuclear Engineering
- \*27P-257** **Stereo 3D reconstruction of a dragonfly flapping motion and its quantification using fine grid spotlight**  
 Natsuki Yamamoto  
 Akita Prefectural University
- 27P-258** **Microscopic toxicity assay of human organoids in microfluidic devices advanced by quantum beam technologies**  
 Kotaro Oyama<sup>1</sup>, Tomoko G Oyama<sup>1</sup>, Hiroki Hamaguchi<sup>1</sup>, Yusuke Kimura<sup>1</sup>, Atsushi Kimura<sup>1</sup>, Kimio Yoshimura<sup>1</sup>, Masaaki Omichi<sup>1</sup>, Yuuji Ueki<sup>1</sup>, Akihiro Hiroki<sup>1</sup>, Hiroyuki Hoshina<sup>1</sup>, Yasuhiro Oshima<sup>1</sup>, Michiyo Suzuki<sup>1</sup>, Shinichiro Mori<sup>2</sup>, Noriaki Seko<sup>1</sup>, Noriko Ishioka<sup>1</sup>, Mitsumasa Taguchi<sup>1</sup>  
<sup>1</sup>Takasaki Institute for Advanced Quantum Science, National Institutes for Quantum Science and Technology, Gunma, Japan, <sup>2</sup>Institute for Quantum Medical Science, National Institutes for Quantum Science and Technology, Chiba, Japan

# Poster Sessions

## Crystal growth & Crystallization technique

**\*27P-259 High-Speed AFM investigation of structured fats' crystallization dynamics**

Anis Chikhoun<sup>1</sup>, Jan Kyselka<sup>2</sup>, Djamel Eddine Chafai<sup>3</sup>

<sup>1</sup>Équipe PVNTA, Laboratoire ALIMENTS, École Supérieure des Sciences de l'Aliment et des Industries Agroalimentaires (ESSAIA), Avenue Ahmed Hamidouche Route de Beaulieu, El Harrach 16200, Alger, Algeria, <sup>2</sup>Department of Dairy, Fat and Cosmetics, University of Chemistry and Technology, 166 28, Prague, Czech Republic, <sup>3</sup>WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kakuma-machi, Kanazawa 920-1192, Japan

**27P-260 Advancing Structural Biology: Innovations and Applications of In Vivo Macromolecular Crystallography at Nagoya University**

Etsuko Tokunaga<sup>1</sup>, Swagatha Ghosh<sup>2</sup>, Hiroki Onoda<sup>1</sup>, Yasufumi Umena<sup>1</sup>, Leonard M.G. Chavas<sup>1,2</sup>

<sup>1</sup>NUSR, Nagoya Univ., Aichi, Japan, <sup>2</sup>Dept. of Appl. Phys., Grad. Sch. of Eng., Nagoya Univ., Aichi, Japan

## Virus structure, function, SARS-CoV-2

**\*27P-261 Cryo-EM structure of infectious and non-infectious Human Astrovirus and insights into its maturation process**

Kentaro Hiraka<sup>1,2</sup>, Raymond Burton-Smith<sup>1,2</sup>, Chihong Song<sup>1,2</sup>, Kana Miyamoto<sup>3</sup>, Kei Haga<sup>3</sup>, Reiko Todaka<sup>3</sup>, Kazuhiko Katayama<sup>3</sup>, Kazuyoshi Murata<sup>1,2</sup>

<sup>1</sup>National Institute for Physiological Sciences, National Institutes of Natural Sciences, <sup>2</sup>Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences, <sup>3</sup>Kitasato University

**\*27P-262 Structural basis for antiviral activity of a nucleoside analogue targeting dengue virus RNA-dependent RNA polymerase**

Shiori Ito<sup>1</sup>, Shunsuke Kita<sup>1</sup>, Kentaro Uemura<sup>1,2,3,4</sup>, Yuki Iwama<sup>1</sup>, Takashi Tadokoro<sup>5</sup>, Hirofumi Sawa<sup>2,6</sup>, Akihiko Sato<sup>2,3,6</sup>, Akira Matsuda<sup>1</sup>, Katsumi Maenaka<sup>1,2,6</sup>

<sup>1</sup>Facul. Pharm. Sci., Hokkaido Univ., Japan, <sup>2</sup>Inter. Inst. Zoonosis Control, Hokkaido Univ., Japan, <sup>3</sup>Shionogi & Co., Ltd., Osaka, Japan, <sup>4</sup>CiDER, Osaka Univ., Japan, <sup>5</sup>Facul. Pharm. Sci., Sanyo-Onoda City Univ., Yamaguchi, Japan, <sup>6</sup>Inst. Vaccine Res. & Devel., Hokkaido Univ., Japan

# Thursday, June 27

**27P-263**      **DEVELOPING BROAD SPECTRUM ANTIVIRALS: PEPTIDE-PORPHYRIN CONJUGATES ACTION, FROM MOLECULAR SCALE TO IN VIVO**

Miguel A. R. B. Castanho

IMM, Instituto de Medicina Molecular, Lisbon, Portugal

**27P-264**      **Conformational dynamics of SARS-CoV-2 spike protein investigated by single molecule fluorescence spectroscopy**

Yuji Itoh<sup>1,2</sup>, Taisei Mori<sup>1,2</sup>, Tateki Suzuki<sup>3</sup>, Takao Hashiguchi<sup>3</sup>, Satoshi Takahashi<sup>1,2</sup>

<sup>1</sup>IMRAM, Tohoku Univ., Miyagi, Japan, <sup>2</sup>Grad. Sch. Life Sci., Tohoku Univ., Miyagi, Japan, <sup>3</sup>LiMe, Kyoto Univ. Kyoto, Japan

## Mechanosensing and Mechanobiology, Biological Temperature

**\*27P-265**      **Investigation of the mechanism of neurite outgrowth using nuclear heating**

Yukiho Shimazaki<sup>1,2</sup>, Shunsuke Chuma<sup>1,2</sup>, Kohki Okabe<sup>3</sup>, Yoshie Harada<sup>2,4,5</sup>

<sup>1</sup>Department of Biological Sciences, Graduate School of Science, Osaka University, Osaka, Japan, <sup>2</sup>Institute for Protein Research, Osaka University, Osaka, Japan, <sup>3</sup>Graduate School of Pharmaceutical Science, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Center for Quantum Information and Quantum Biology, Osaka University, Osaka, Japan, <sup>5</sup>Premium Research Institute for Human Metaverse Medicine (WPI-PRIME), Osaka University, Osaka, Japan

**\*27P-266**      **Small-molecule FLIM sensors for visualization of temperature in calcium cycling of sarcoplasmic reticulum**

Takeru Yamazaki<sup>1</sup>, Kayoko Nomura<sup>1</sup>, Toshiko Yamazawa<sup>2</sup>, Satoshi Arai<sup>1</sup>

<sup>1</sup>WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa Univ., Ishikawa, Japan, <sup>2</sup>Core Research Facilities, The Jikei Univ. Sch. of Med., Tokyo, Japan

**27P-267**      **Differential roles of a periplasmic tension sensor and a cytoplasmic one in the channel opening of MscL**

Takeshi Nomura<sup>1</sup>, Yasuyuki Sawada<sup>2</sup>, Masahiro Sokabe<sup>3</sup>

<sup>1</sup>School of Human Science and Environment, University of Hyogo, Hyogo, Japan, <sup>2</sup>Institute of Materials Innovation, Institutes of Innovation for Future Society, Nagoya University, Nagoya, Japan, <sup>3</sup>Human Information Systems Laboratory, Kanazawa Institute of Technology, Ishikawa, Japan

# Poster Sessions

## Biophysics of disease

**\*27P-268** **Tau Inclusions in Soma Induce Neuronal Death in Human iPSC-derived Neurons**

Naoki Kato<sup>1</sup>, Sumihiro Maeda<sup>2</sup>, Hideyuki Okano<sup>2</sup>, Hiroko Bannai<sup>1</sup>

<sup>1</sup>School of Advanced Science and Engineering, Waseda University, <sup>2</sup>School of Medicine, Keio University

**\*27P-269** **Reversible tangle formation of Alzheimer's disease-fold Tau filaments by conformational changes of the fuzzy coat region**

Shingo Tamai<sup>1,2</sup>, Takashi Nomura<sup>1</sup>, Ryohei Kojima<sup>3</sup>, John Burke<sup>1</sup>, Atsushi Yamagata<sup>4</sup>, Mikako Shirouzu<sup>4</sup>, Takeshi Fukuma<sup>3</sup>, Motomasa Tanaka<sup>1,2</sup>

<sup>1</sup>Lab. for Protein Conformation Diseases, RIKEN CBS, <sup>2</sup>Biomedical Sciences & Engineering Track, Tokyo Medical and Dental University, <sup>3</sup>WPI-NanoLSI, Kanazawa University, <sup>4</sup>Lab. for Protein Functional and Structural Biology, RIKEN BDR

**27P-270** **Lead and Mercury poisoning promote cardiac dysfunction in isolated hearts affecting cardiac ion channels and intracellular calcium homeostasis.**

Gonzalo R. Ferreira<sup>1</sup>, Romina Cardozo<sup>1</sup>, Axel Santander<sup>1</sup>, Luisina Chavarria<sup>1</sup>, Santiago Sastre<sup>1</sup>, Milagros Benitez<sup>1</sup>, Nicolas Mujica<sup>1</sup>, Lucia Dominguez<sup>1</sup>, Garth Lamb Nicolson<sup>2</sup>

<sup>1</sup>Laboratory of Ion channels, Biological Membranes and Cell Signaling. Department of Biophysics. Facultad de Medicina. Montevideo. Universidad de la Republica. Uruguay., <sup>2</sup>The Institute for Molecular Medicine. Huntington Beach. San Diego. CA. USA.

## Miscellaneous topics

**\*27P-271** **Novel antibacterial agents to treat Multidrug resistant bacteria causing wound infections in diabetic patients**

Mithali Raj Marla<sup>2</sup>, Shailaja Raj Marla<sup>1</sup>, Maria Shajan<sup>1</sup>

<sup>1</sup>St. Francis College for Women, <sup>2</sup>Kamineni Institute of Medical Sciences

**27P-272** **An Interactive 3-D Graph Tool to Visualize Electromagnetic Waves on Web Browsers for Physics Education**

Satoshi Yamaguchi, Masayuki Iriisa

Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Japan



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<sup>1</sup>, Yongchan Lee<sup>1</sup>, Yu Toyoda<sup>2,3</sup>, Teppei Takada<sup>3</sup>, Tomohiro Nishizawa<sup>1</sup>

<sup>1</sup>Graduate School of Medical Life Science, Yokohama City University, Yokohama, Japan, <sup>2</sup>Department of Integrative Physiology and Bio-Nano Medicine, National Defense Medical College, Tokorozawa, Japan, <sup>3</sup>Department of Pharmacy, The University of Tokyo Hospital, Tokyo, Japan

**28P-002**

### **Molecular basis of substrate recognition in human $\gamma$ -LAT1-CD98hc complex**

Juntaro Nakahara<sup>1</sup>, Yongchang Lee<sup>1</sup>, Natsumi Yoshida<sup>1</sup>, Pattama Wiriyasermkul<sup>2</sup>, Ryo Ekimoto<sup>1</sup>, Mitsunori Ikeguchi<sup>1</sup>, Sushi Nagamori<sup>2</sup>, Tomohiro Nishizawa<sup>1</sup>

<sup>1</sup>Graduate School of Medical Life Science, Yokohama City University, <sup>2</sup>Department of Laboratory Medicine, The Jikei University School of Medicine

**28P-003**

### **Particle formation for nanofiber elongation in Fibroin artificial sequence**

Kento Yonezawa<sup>1,2</sup>, Chan Kok Sim<sup>2</sup>, Takehiro Sato<sup>3</sup>, Haruya Kajimoto<sup>2</sup>, Kiichi Hayashi<sup>2</sup>, Takuya Sawai<sup>2</sup>, Yusuke Okamoto<sup>2</sup>, Rakuri Aiba<sup>2</sup>, Yuki Nakatani<sup>2</sup>, Kenta Kimura<sup>2</sup>, Yoichi Yamazaki<sup>2</sup>, Sachiko Toma-Fukai<sup>2</sup>, Yugo Hayashi<sup>2</sup>, Hironari Kamikubo<sup>1,2</sup>

<sup>1</sup>NAIST CDG, <sup>2</sup>NAIST MS, <sup>3</sup>Spiber. Inc.

## Poster Sessions

---

- 28P-004**      **Cryo-EM analysis of mouse b0,+AT-rBAT complex**  
Aoi Maeda<sup>1</sup>, Yongchan Lee<sup>1</sup>, Pattama Wiriyasermkul<sup>2</sup>, Sushi Nagamori<sup>2</sup>,  
Tomohiro Nishizawa<sup>1</sup>  
<sup>1</sup>Graduate School of Medical Life Science, Yokohama City University, <sup>2</sup>Department of  
Laboratory Medicine, The Jikei University School of Medicine
- 28P-005**      **Cryo-EM Structure of MexB-MexY Chimera Protein MexBYB  
Multidrug Efflux Pump**  
Jiye Wang<sup>1</sup>, Kenta Tsutsumi<sup>1</sup>, Ryosuke Nakashima<sup>2</sup>, Kunihiro Nishino<sup>2</sup>,  
Eiki Yamashita<sup>1</sup>, Atsushi Nakagawa<sup>1</sup>  
<sup>1</sup>Institute for Protein Research, Osaka University, Osaka, Japan, <sup>2</sup>SANKEN, 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<sup>1</sup>, Ryusei Yamada<sup>2</sup>, Hiroki Konno<sup>3</sup>  
<sup>1</sup>Graduate School of Frontier Science Initiative, Kanazawa University, Kanazawa,  
Japan, <sup>2</sup>Graduate School of Natural Science and Technology, Kanazawa University,  
Kanazawa, Japan, <sup>3</sup>WPI Nano Life Science Institute (WPI-NanoLSI), 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<sup>1</sup>, Masahiro Shimizu<sup>1</sup>, Ritsuki Sakamoto<sup>2</sup>, Yasuhiro Yunoki<sup>1</sup>,  
Rintaro Inoue<sup>1</sup>, Masaaki Sugiyama<sup>1</sup>  
<sup>1</sup>Institute for Integrated Radiation and Nuclear Science, Kyoto University, <sup>2</sup>Graduate  
School of 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<sup>1</sup>, Tiankun Zhou<sup>2</sup>, Jay-How Yang<sup>3</sup>, Marcin Sikorski<sup>1</sup>, Jayanath Koliyadu<sup>1</sup>, Mohammed Vakili<sup>1</sup>, Johan Bielecki<sup>1</sup>, Richard Bean<sup>1</sup>, Tokushi Sato<sup>1</sup>, Adrian Mancuso<sup>1,2,4</sup>

<sup>1</sup>European XFEL, Schenefeld, Schleswig-Holstein, Germany, <sup>2</sup>Diamond Light Source, Didcot OX11 0DE, United Kingdom, <sup>3</sup>Arizona State University, Tempe, USA, <sup>4</sup>La Trobe University, Melbourne, Australia

**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<sup>1</sup>, Lukas Winter<sup>1</sup>, Andreas Vogt<sup>2,3,4</sup>, Sandra Posch<sup>1</sup>, Yavuz Öztürk<sup>2</sup>, Christine Siligan<sup>1</sup>, Nikolaus Goessweiner-Mohr<sup>1</sup>, Nora Hagleitner-Ertugrul<sup>1</sup>, Hans-Georg Koch<sup>2,3</sup>, Peter Pohl<sup>1</sup>

<sup>1</sup>Institute of Biophysics, Johannes Kepler University Linz, Gruberstrasse 40, A-4020 Linz, Austria, <sup>2</sup>Institut für Biochemie und Molekularbiologie, ZBMZ, Faculty of Medicine, Albert-Ludwigs-Universität Freiburg, 79104 Freiburg, Germany, <sup>3</sup>Spemann-Graduate School of Biology and Medicine (SGBM), Albert-Ludwigs-Universität Freiburg, 79104 Freiburg, Germany, <sup>4</sup>Faculty of Biology, Albert-Ludwigs-Universität Freiburg, 79104 Freiburg, Germany

**28P-015**      **Modeling of Photoswitchable Ligands Linked to Physiology**

Wieslaw A Nowak

Department of Biophysics, Institute of Physics, N. Copernicus University in Torun, Poland

## Poster Sessions

---

**28P-016**      **Identifying functional hotspot residues for activation in M2 muscarinic receptor**

Yuya Sugiura<sup>1</sup>, Tatsuya Ikuta<sup>3</sup>, Yuji Sumii<sup>1</sup>, Hirokazu Tsujimoto<sup>5</sup>, Ryoji Suno<sup>4,5</sup>, Putri Nur Arina Binti Mohd Ariff<sup>1</sup>, So Iwata<sup>5</sup>, Norio Shibata<sup>1</sup>, Asuka Inoue<sup>3</sup>, Takuya Kobayashi<sup>4,5</sup>, Hideki Kandori<sup>1,2</sup>, Kota Katayama<sup>1,2</sup>

<sup>1</sup>Department of Life Science and Applied Chemistry, Nagoya Institute of Technology, <sup>2</sup>OptoBioTechnology Research Center, Nagoya Institute of Technology, <sup>3</sup>Graduate School of Pharmaceutical Sciences, Tohoku University, <sup>4</sup>Department of Medical Chemistry, Kansai Medical University, <sup>5</sup>Department of Cell Biology and Medical Chemistry, Graduate School of Medicine, Kyoto University

**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 Irisa

Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., Japan

**28P-020**      **Fantastic Enzymes and where to find them**

Ehmke Pohl<sup>1</sup>, Katy Cornish<sup>1</sup>, Stefanie Freitag-Pohl<sup>1</sup>, Arnthór Aevarsson<sup>2</sup>

<sup>1</sup>Department of Chemistry, Durham University, Durham, DH1 3LE, UK, <sup>2</sup>Matis ohf, Vinlandsleid 12, Reykjavik 113, Iceland

**28P-021**      **Theoretical study on allosteric control mechanism of a luminescent reaction of bioluminescent protein Aequorin**

Tomohiro Ando<sup>1</sup>, Toshiya Funahashi<sup>2</sup>, Toru Nakatsu<sup>3</sup>, Shigehiko Hayashi<sup>1</sup>

<sup>1</sup>Grad. Sch. of Sci. Kyoto Univ., <sup>2</sup>Grad. Sch. of Pharm. Sci. Kyoto Univ., <sup>3</sup>Sch. of Pharm. Sci. Wakayama Med. Univ.

**28P-022 Correlating single molecule studies with Cryo-EM structures to understand the inner workings of ATP synthase.**

Meghna Sobti<sup>1,2</sup>, Hiroshi Ueno<sup>3</sup>, Simon Brown<sup>4</sup>, Hiroyuki Noji<sup>3</sup>, Alastair Stewart<sup>1,2</sup>

<sup>1</sup>Molecular, Structural and Computational Biology Division, The Victor Chang Cardiac Research Institute, Darlinghurst, Australia, <sup>2</sup>St Vincent's Clinical School, Faculty of Medicine, UNSW Sydney, Kensington, Australia., <sup>3</sup>Applied Chemistry, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Molecular Horizons, University of Wollongong and Illawarra Health and Medical Research Institute, Wollongong, NSW 2522, Australia.

**28P-023 Molecular basis for heat-hypersensitive mutants of ryanodine receptor type 1**

Liu Chuji<sup>1</sup>, Yamazawa Toshiko<sup>2</sup>, Oyama Kotaro<sup>3</sup>, Murayama Takashi<sup>4</sup>, Kobayashi Takuya<sup>4</sup>, Harada Yoshie<sup>1,5</sup>, Suzuki Madoka<sup>1</sup>

<sup>1</sup>Institute for Protein Research, Osaka University, <sup>2</sup>Core Research Facilities, The Jikei University School of Medicine, <sup>3</sup>Foundational Quantum Technology Research Directorate, National Institutes for Quantum Science and Technology, <sup>4</sup>Department of Cellular and Molecular Pharmacology, Juntendo University Graduate School of Medicine, <sup>5</sup>Center for Quantum Information and Quantum Biology, Osaka University

**28P-024 Proton-coupled electron transfer dynamics and ligand binding in the mycobacterial respiratory supercomplex III<sub>2</sub>IV<sub>2</sub>**

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<sup>1</sup>, Keisuke Tanaka<sup>2</sup>, Yuko Ushiki-Kaku<sup>2</sup>, Akihiro Tsuji<sup>1</sup>, Shunji Hattori<sup>2</sup>, Masayuki Abe<sup>1</sup>

<sup>1</sup>Graduate School of Engineering Science, Osaka University, <sup>2</sup>Nippi Research Institute of Biomatrix

## Poster Sessions

---

- 28P-026**      **Structural basis for the pH-dependent functional regulation of cytochrome b6f complex from *Chlamydomonas reinhardtii***  
Akihiro Kawamoto<sup>1</sup>, Hatsuki Tanabe<sup>1</sup>, Shin-Ichiro Ozawa<sup>2</sup>, Hideaki Tanaka<sup>1</sup>, Yuichiro Takahashi<sup>3</sup>, Genji Kurisu<sup>1</sup>  
<sup>1</sup>Institute for Protein Research, Osaka University, Japan, <sup>2</sup>Institute of Plant Science and Resources, Okayama University, Japan,, <sup>3</sup>Research Institute for Interdisciplinary Science, Okayama University, Japan
- 28P-027**      **Structural insights into the elongation complex of RNA polymerase II paused at the +1 nucleosome entrance**  
Masahiro Naganuma<sup>1</sup>, Tomoya Kujirai<sup>1,2</sup>, Haruhiko Ehara<sup>1</sup>, Tamami Uejima<sup>1</sup>, Tomoko Ito<sup>2</sup>, Mie Goto<sup>1</sup>, Mari Aoki<sup>1</sup>, Masami Henmi<sup>1</sup>, Sayako Miyamoto-Kohno<sup>1</sup>, Mikako Shirouzu<sup>1</sup>, Hitoshi Kurumizaka<sup>1,2</sup>, Shun-ichi Sekine<sup>1</sup>  
<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Yokohama, Japan, <sup>2</sup>Laboratory of Chromatin Structure and Function, Institute for Quantitative Biosciences, The University of Tokyo, Tokyo, Japan
- 28P-028**      **Positive allosteric modulation of cytochrome c oxidase activity**  
Yuya Nishida<sup>1</sup>, Takumi Tateno<sup>2</sup>, Takemasa Nagao<sup>1</sup>, Yasunori Shintani<sup>1,2</sup>  
<sup>1</sup>National Cerebral and Cardiovascular Center, Osaka, Japan, <sup>2</sup>Osaka University Graduate School of Medicine, Osaka, Japan
- 28P-029**      **The structure and function of the ghrelin receptor coding for drug actions**  
Yuki Shiimura<sup>1,2</sup>, Dohyun Im<sup>2</sup>, Ryosuke Tany<sup>3</sup>, Hidetsugu Asada<sup>2</sup>, Ryoji Kise<sup>3</sup>, Hideko Wakasugi-Masuho<sup>3</sup>, Kazuma Matsui<sup>1</sup>, Jun-ichi Kishikawa<sup>5</sup>, Takayuki Kato<sup>5</sup>, Masayasu Kojima<sup>1</sup>, So Iwata<sup>2</sup>, Ikuo Masuho<sup>3,4</sup>  
<sup>1</sup>Division of Molecular Genetics, Institute of Life Science, Kurume University, <sup>2</sup>Department of Cell Biology, Graduate School of Medicine, Kyoto University, <sup>3</sup>Pediatrics and Rare Diseases Group, Sanford Research, <sup>4</sup>Department of Pediatrics, Sanford School of Medicine, University of South Dakota, <sup>5</sup>Institute for Protein Research, Osaka University
- 28P-030**      **Cracking the code: A computational expedition into neurodegenerative polypeptides and innovative therapies**  
Ioana Mariuca Ilie<sup>1</sup>, Simone Ruggeri<sup>2</sup>  
<sup>1</sup>University of Amsterdam, The Netherlands, <sup>2</sup>University of Wageningen, 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<sup>1,2</sup>, Clint Pauling<sup>1,3</sup>, Abhishek Shrivastava<sup>1,2</sup>, [Dhara D. Shah](#)<sup>1,3</sup>  
<sup>1</sup>Biodesign Center for Fundamental and Applied Microbiomics, Arizona State University, Tempe, AZ, USA., <sup>2</sup>School of Life Sciences, Arizona State University, Tempe, AZ, USA., <sup>3</sup>School of Mathematical and Natural Sciences, Arizona State University, Glendale, AZ, USA.

**28P-033 An integrated approach using sequential and structural features for precise prediction of protein-protein binding affinity**

[Zhongliang Guo](#)<sup>1</sup>, Osamu Muto<sup>1,2</sup>, Rui Yamaguchi<sup>1,2</sup>  
<sup>1</sup>Aichi Cancer Center Research Institute, <sup>2</sup>Nagoya University

**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](#)<sup>1,2,3,4</sup>, Samuel Holvec<sup>1,2,3,4</sup>, Antony Lechner<sup>1,2,3,4,5</sup>, Léo Fréchin<sup>1,2,3,4</sup>, Nimali De Silva<sup>1,2,3,4</sup>, Isabelle Hazemann<sup>1,2,3,4</sup>, Philippe Wolff<sup>5</sup>, Otilie von Loeffelholz<sup>1,2,3</sup>, Bruno Klaholz<sup>1,2,3,4</sup>  
<sup>1</sup>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, <sup>2</sup>Centre National de la Recherche Scientifique (CNRS) UMR 7104, Illkirch, France, <sup>3</sup>Institut National de la Santé et de la Recherche Médicale (Inserm) U964, Illkirch, France, <sup>4</sup>Université de Strasbourg, Strasbourg, France, <sup>5</sup>Architecture et Réactivité de l'ARN, CNRS UPR9002, Institute of Molecular and Cellular Biology (IBMC), Université de Strasbourg, 15 rue René Descartes, Strasbourg, France

**Protein: Physical property****28P-035 Amyloid formation of the  $\beta$ 2-microglobulin variants, D76N and V27M: Diverse diseases via a common assembly mechanism**

[Masatomo So](#)<sup>1,2</sup>, Roberto Martinez<sup>1</sup>, Nicolas Guthertz<sup>1</sup>, Martin Wilkinson<sup>1</sup>, Sheena Radford<sup>1</sup>  
<sup>1</sup>University of Leeds, Leeds, UK, <sup>2</sup>Kyoto University, Kyoto, Japan

## Poster Sessions

---

---

- 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<sup>1</sup>, Munehito Arai<sup>1,2,3</sup>  
<sup>1</sup>College of Arts and Sciences, The University of Tokyo, Tokyo, Japan., <sup>2</sup>Department of Life Sciences, The University of Tokyo, Tokyo, Japan., <sup>3</sup>Department of Physics, The University of Tokyo, Tokyo, Japan.
- 28P-038**      **Structural studies of protein condensates prepared by ultracentrifugation/air-drying**  
Ryuga Someya<sup>1</sup>, Akira Nomoto<sup>1</sup>, Suguru Nishinami<sup>2</sup>, Hiroka Sugai<sup>3</sup>, Kentaro Shiraki<sup>1</sup>  
<sup>1</sup>Institute of Pure and Applied Sciences, University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki 305- 8573, Japan, <sup>2</sup>Institute for Genetic Medicine, Hokkaido University, Kita 15, Nishi 7, Kita-ku, Sapporo 060-0815, Japan, <sup>3</sup>International Research Frontiers Initiative, Tokyo Institute of Technology, 4259 Nagatsuta-cho, Midori-ku, Yokohama, Kanagawa 226-8501, 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<sup>1,2</sup>, Thomas Gutschmann<sup>1,2</sup>  
<sup>1</sup>Research Center Borstel, Division of Biophysics, Borstel, Germany,, <sup>2</sup>Centre for Structural Systems Biology, Hamburg, Germany

## Protein: Measurement & Analysis

- 28P-043** **BioSAXS for solution protein structure analysis at SPring-8**  
Satoshi Nagao<sup>1</sup>, Hiroyasu Masunaga<sup>1</sup>, Nobutaka Shimizu<sup>2,3</sup>,  
Masaki Yamamoto<sup>3</sup>, Hiroshi Sekiguchi<sup>1</sup>  
<sup>1</sup>JASRI/SPring-8, <sup>2</sup>KEK, <sup>3</sup>RIKEN/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<sup>1</sup>, Suai Anzawa<sup>1</sup>, Tadashi Kodama<sup>2</sup>, Kyoko Furuita<sup>2</sup>,  
Wataru Togawa<sup>1</sup>, Ryoga Kobayashi<sup>3</sup>, Naotaka Sekiyama<sup>3</sup>, Yohei Miyanoiri<sup>2</sup>,  
Toshimichi Fujiwara<sup>2</sup>, Hidehito Toshio<sup>3</sup>, Chojiro Kojima<sup>1,2</sup>  
<sup>1</sup>Yokohama National University, <sup>2</sup>Osaka University, <sup>3</sup>Kyoto University
- 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<sup>1</sup>, Hiroshi Sugimoto<sup>2</sup>, Yuri Kasu<sup>1</sup>  
<sup>1</sup>Saga University, <sup>2</sup>RIKEN

# Poster Sessions

## Protein: Design & Engineering

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

Thibault Philippe Laurent Di Meo<sup>1</sup>, Yannick Rondelez<sup>2</sup>, Hiroyuki Noji<sup>1</sup>

<sup>1</sup>Noji Laboratory, Department of Applied Chemistry, Graduate School of Engineering, The University of Tokyo, <sup>2</sup>Laboratoire Gulliver, CNRS UMR 7083, ESPCI Paris, PSL Research University

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

Makoto Nakakido<sup>1</sup>, Taichi Sumikawa<sup>1</sup>, Ryo Matsunaga<sup>1</sup>, Daisuke Kuroda<sup>1,2</sup>, Satoru Nagatoishi<sup>1</sup>, Kouhei Tsumoto<sup>1</sup>

<sup>1</sup>The University of Tokyo, <sup>2</sup>National Institute of Infectious Diseases

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

Masahiro Noji<sup>1,2</sup>, Yukihiro Sugita<sup>3,4,5</sup>, Makito Miyazaki<sup>6,7</sup>, Yuta Suzuki<sup>6,8</sup>

<sup>1</sup>Research Fellow of Japan Society for the Promotion of Science, Japan, <sup>2</sup>Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan, <sup>3</sup>Institute for Life and Medical Sciences, Kyoto University, Kyoto, Japan, <sup>4</sup>Graduate School of Biostudies, Kyoto University, Kyoto, Japan, <sup>5</sup>Hakubi Center for Advanced Research, Kyoto University, Kyoto, Japan, <sup>6</sup>PRESTO, Japan Science and Technology Agency, Japan, <sup>7</sup>RIKEN Center for Biosystems Dynamics Research, Yokohama, Japan, <sup>8</sup>Institute for Integrated Cell-Material Sciences, 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

**28P-052**      **De Novo Design of P-loop Harboring Protein**

Takahiro Kosugi<sup>1,2,3,4</sup>, Nobuyasu Koga<sup>2,5</sup>

<sup>1</sup>Institute for Molecular Science (IMS), National Institutes of Natural Sciences (NINS), <sup>2</sup>Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences (NINS), <sup>3</sup>Molecular Science Program, SOKENDAI (The Graduate University for Advanced Studies), <sup>4</sup>PRESTO, Japan Science and Technology Agency, <sup>5</sup>Institute for Protein Research (IPR), Osaka University

**28P-053 De novo design of helical peptide binders targeting the KIX domain of CBP**Shunji Suetaka<sup>1</sup>, Munehito Arai<sup>1,2,3</sup><sup>1</sup>Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Department of Physics, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Komaba Organization for Educational Excellence, College of Arts and Sciences, The University of Tokyo, Tokyo, Japan**28P-054 Red fluorescent proteins engineered from green fluorescent proteins**Hiroimi Imamura<sup>1</sup>, Shiho Otsubo<sup>2</sup>, Mizuho Nishida<sup>1</sup>, Norihiro Takekawa<sup>2</sup>, Katsumi Imada<sup>2</sup><sup>1</sup>Kyoto University, <sup>2</sup>Osaka 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<sup>1,2</sup>, Yuki Kamijo<sup>1</sup>, Robert Campbell<sup>1</sup><sup>1</sup>Department of Chemistry, School of Science, The University of Tokyo, <sup>2</sup>PRESTO, Japan Science and Technology Agency**28P-057 Role of “relaxed” peptide bond in protein structure and function**Kaori Chiba<sup>1</sup>, Masaru Hoshino<sup>2</sup>, Hiromu Ohshima<sup>1</sup>, Manami Suwa<sup>1</sup><sup>1</sup>National Institute of Technology, Ibaraki college, <sup>2</sup>Kyoto University**Protein: Intrinsic disorder****28P-058 Deciphering the Role of GM1 Ganglioside-Bound A $\beta$  Species in Alzheimer's Disease: Insights from Monoclonal Antibody 4396C and Advanced Biophysical Techniques**Maho Yagi-Utsumi<sup>1,2</sup>, Satoru G. Itoh<sup>2,3</sup>, Yui Kanaoka<sup>4</sup>, Shogo Miyajima<sup>4</sup>, Katsuhiko Yanagisawa<sup>5</sup>, Katsuyuki Nishimura<sup>3</sup>, Hisashi Okumura<sup>2,3</sup>, Takayuki Uchihashi<sup>2,4</sup>, Koichi Kato<sup>1,2,3</sup><sup>1</sup>Graduate School of Pharmaceutical Sciences, Nagoya City University, <sup>2</sup>Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences, <sup>3</sup>Institute for Molecular Science, National Institutes of Natural Sciences, <sup>4</sup>Department of Physics, Nagoya University, <sup>5</sup>Research and Development Center for Precision Medicine, University of Tsukuba

# Poster Sessions

## Membrane proteins

- 28P-060**      **Strategies for Cancer Therapy by Regulating Intracellular Dynamics of Antibody Drugs**  
Kazuya Kabayama<sup>1,2,3</sup>, Yoshiyuki Manabe<sup>2,3</sup>, Atsushi Toyoshima<sup>1,3</sup>, Kazuko Kaneda<sup>2,3</sup>, Tadashi Watabe<sup>4</sup>, Koichi Fukase<sup>1,2,3</sup>  
<sup>1</sup>Institute for Radiation Sciences, Osaka University, <sup>2</sup>Department of Chemistry, Graduate School of Science, Osaka University, <sup>3</sup>FRC, Graduate School of Science, Osaka University, <sup>4</sup>Graduate School of Medicine, Osaka University
- 28P-061**      **Differential molecular responses of PIEZO1 to membrane tension and ligand binding observed with diffracted X-ray tracking**  
Mei Ishii<sup>1</sup>, Kayoko Kawaguchi<sup>2</sup>, Mayui Sugiura<sup>2</sup>, Hiroshi Sekiguchi<sup>3</sup>, Tatsuya Arai<sup>1</sup>, Kazuhiro Mio<sup>2</sup>, Yuji Sasaki<sup>1</sup>  
<sup>1</sup>The Graduate School of Frontier Sciences, The Univ. of Tokyo, <sup>2</sup>National Institute of Advanced Industrial Science and Technology, <sup>3</sup>JASRI
- 28P-062**      **Thermodynamic Analysis of pH-Dependent Substrate Binding in the Multidrug Transporter, EmrE**  
Kazumi Shimono<sup>1,2</sup>, Keisuke Matsuda<sup>2</sup>, Shoko Suzuki<sup>2</sup>, Shuichi Miyamoto<sup>1</sup>, Seiji Miyauchi<sup>2</sup>  
<sup>1</sup>Sojo University, <sup>2</sup>Toho University
- 28P-063**      **INTRAMOLECULAR DOMAIN DYNAMICS OF LIGHT-HARVESTING PROTEIN LH1-RC OBSERVED BY THE DIFFRACTED X-RAY TRACKING METHOD**  
Tatsunari Ohkubo<sup>1,2</sup>, Tatsuya Arai<sup>2,3</sup>, Hiroshi Sekiguchi<sup>4</sup>, Kazuhiro Mio<sup>1,2</sup>, Yuji C. Sasaki<sup>2,3</sup>  
<sup>1</sup>Grad. Sch. Med Life Sci, Yokohama City University, <sup>2</sup>OPERANDO-OIL, AIST, <sup>3</sup>Dept Adv Matl Sci, Univ Tokyo, <sup>4</sup>JASRI
- 28P-064**      **NMR and modelling study of interaction of spider Cys-knot toxins with membrane and cationic ion-channels of P-loop superfamily**  
Zakhar Shenkarev<sup>1,2</sup>, Pavel Mironov<sup>2,3</sup>, Eugene Kovalenko<sup>2,3</sup>, Dmitrii Kulbatskii<sup>2,3</sup>, Alexander Paramonov<sup>2,3</sup>, Mikhail Shulepko<sup>1</sup>, Maxim Zaigraev<sup>2</sup>, Ekaterina Lyukmanova<sup>1,2,3</sup>  
<sup>1</sup>Department of Biology, MSU-BIT Shenzhen University, Shenzhen, China, <sup>2</sup>Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia, <sup>3</sup>Faculty of Biology, Lomonosov Moscow State University, 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<sup>3</sup>, Chimari Jiko<sup>1</sup>, Jiannan Li<sup>2</sup>, Chai Gopalasingam<sup>3</sup>,  
Hideki Shigematsu<sup>4</sup>, Pilseok Chae<sup>5</sup>

<sup>1</sup>Kyoto University, Kyoto, Japan, <sup>2</sup>Osaka University, Osaka, Japan, <sup>3</sup>Riken SPring-8 Center, Sayo, Japan, <sup>4</sup>JASRI, Sayo, Japan, <sup>5</sup>Hanyang University, Ansan, Korea

**28P-068**      **The functional role of the pleckstrin homology domains of dynamins in evolution and disease**

Isabel Pérez-Jover<sup>1,2</sup>, Javier Espadas<sup>1,2</sup>, Irune Ornos<sup>1,2</sup>,  
Julene Ormaetxea Guisasola<sup>1,2</sup>, Isaac Santos-Pérez<sup>3</sup>, Vadim Frolov<sup>1,4</sup>,  
Anna Shnyrova<sup>1,2</sup>

<sup>1</sup>Biophysics Institute (CSIC, UPV/EHU), Leioa, Spain, <sup>2</sup>Department of Biochemistry and Molecular Biology, University of the Basque Country, Leioa, Spain, <sup>3</sup>Electron Microscopy and Crystallography, Center for Cooperative Research in Biosciences (CIC bioGUNE), Derio, Spain, <sup>4</sup>IKERBASQUE, Basque Foundation for Science, Bilbao, Spain

## DNA & DNA binding proteins

**28P-069**      **The conformational analysis of DNA and nucleosome with doxorubicin analyzed by molecular dynamics simulation**

Hisashi Ishida<sup>1</sup>, Hidetoshi Kono<sup>1,2</sup>

<sup>1</sup>Institute for Quantum Life Science, National Institutes for Quantum Science and Technology, <sup>2</sup>Graduate School of Science, Chiba University

**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<sup>1,2</sup>

<sup>1</sup>Laboratory of DNA-protein interactions, Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, 119991 Vavilov str, 32, Moscow, Russia, <sup>2</sup>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<sup>1,2</sup>, Takashi Nagata<sup>1,2</sup>, Tomoki Sakamoto<sup>2</sup>, Omar Eladl<sup>2</sup>, Keiko Kondo<sup>1</sup>, Masato Katahira<sup>1,2</sup>

<sup>1</sup>Institute of Advanced Energy, Kyoto University, <sup>2</sup>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<sup>1</sup>, Masahiko Taguchi<sup>2</sup>, Shigehiko Hayashi<sup>1</sup>

<sup>1</sup>Kyoto University, Kyoto, Japan, <sup>2</sup>Tohoku University, Miyagi, Japan

### **DNA/RNA nanotechnology**

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

Hirotake Udono<sup>1</sup>, Minzhi Fan<sup>1</sup>, Yoko Saito<sup>1</sup>, Hirohisa Ohno<sup>2</sup>, Shin-ichiro M. Nomura<sup>3</sup>, Yoshihiro Shimizu<sup>4</sup>, Hirohide Saito<sup>2</sup>, Masahiro Takinoue<sup>1</sup>

<sup>1</sup>Tokyo Institute of Technology, <sup>2</sup>Kyoto University, <sup>3</sup>Tohoku University, <sup>4</sup>Riken

## **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)

## Friday, June 28

**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 Heddle  
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<sup>1</sup>, Nguyen Viet Cuong<sup>2</sup>, Dam Hieu Chi<sup>3</sup>  
<sup>1</sup>School of Materials Science, Japan Advanced Institute of Science and Technology, <sup>2</sup>HPC Systems, <sup>3</sup>School of Knowledge Science, Japan Advanced Institute of Science and Technology

# Poster Sessions

## Morphogenesis and Development

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

Toshinori Namba<sup>1,2</sup>, Kaoru Sugimura<sup>1,3,4</sup>, Shuji Ishihara<sup>1,2</sup>

<sup>1</sup>Universal Biology Institute, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>4</sup>Graduate School of Frontier Sciences, The University of Tokyo, Chiba, Japan

## Molecular motor

### 28P-085 KIF6 is essential for male fertility through the ATP production pathway within sperm flagella

Tsukasa Makino<sup>1</sup>, Chizuru Ito<sup>2</sup>, Takeshi Masuda<sup>3</sup>, Kazuho Ikeda<sup>1</sup>, Daisuke Takao<sup>1,4</sup>, Yasushi Okada<sup>1,5</sup>, Kiyotaka Toshimori<sup>2</sup>, Masahide Kikkawa<sup>1</sup>

<sup>1</sup>University of Tokyo, <sup>2</sup>Chiba University, <sup>3</sup>Keio University, <sup>4</sup>Huazhong Agricultural University, <sup>5</sup>RIKEN BDR

### 28P-086 Exploring Efficient Control of F1-ATPase

Takahide Mishima<sup>1</sup>, Yohei Nakayama<sup>1</sup>, David A. Sivak<sup>2</sup>, Shoichi Toyabe<sup>1</sup>

<sup>1</sup>Department of Applied Physics, Graduate School of Engineering, Tohoku University, <sup>2</sup>Department of Physics, Simon Fraser University

### 28P-087 Product inhibition slow down the moving velocity of processive chitinase and sliding-intermediate state blocks re-binding of product

Yoshiko Tanaka<sup>1</sup>, Takayuki Uchihashi<sup>2</sup>, Akihiko Nakamura<sup>1,3</sup>

<sup>1</sup>Shizuoka University, <sup>2</sup>Nagoya University, <sup>3</sup>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<sup>1</sup>, Shinsaku Maruta<sup>2</sup>, Yasunobu Sugimoto<sup>3</sup>, Kai Nishikubo<sup>1</sup>, Taiki Tominaga<sup>4</sup>, Akio Inoue<sup>5</sup>, Hidetaka Furuya<sup>6</sup>, Katsuzo Wakabayashi<sup>6</sup>, Toshiaki Arata<sup>7</sup>  
<sup>1</sup>National Institutes for Quantum Science and Technology, <sup>2</sup>Soka University, <sup>3</sup>Nagoya University, <sup>4</sup>CROSS, <sup>5</sup>Kyoto University, <sup>6</sup>Osaka University, <sup>7</sup>Osaka Metropolitan University
- 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<sup>1,2,3,4</sup>, Takayuki Kato<sup>5</sup>, Akihiro Kawamoto<sup>5</sup>, Tomoko Miyata<sup>6,7</sup>, Keisuke Kawakami<sup>8</sup>, Junso Fujita<sup>6,7,9,10</sup>, Tasuku Hamaguchi<sup>3,4</sup>, Keiichi Namba<sup>6,7</sup>, Makoto Miyata<sup>1,2</sup>  
<sup>1</sup>Grad. Sch. Sci., Osaka Metro. Univ., Osaka, Japan, <sup>2</sup>OCARINA, Osaka Metro. Univ., Osaka, Japan, <sup>3</sup>IMRAM, Tohoku Univ., Miyagi, Japan, <sup>4</sup>AIMcS, Tohoku Univ., Miyagi, Japan, <sup>5</sup>IPR, Osaka Univ., Osaka, Japan, <sup>6</sup>Grad. Sch. Frontier Biosci., Osaka Univ., Osaka, Japan, <sup>7</sup>JEOL YOKOGUSHI Res. Alliance Lab, Osaka Univ., Osaka, Japan, <sup>8</sup>RIKEN SPring-8, Hyogo, Japan, <sup>9</sup>Grad. Sch. Pharm. Sci., Osaka Univ., Osaka, Japan, <sup>10</sup>Otsuka Pharm. Co., Ltd., 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  $\lambda$  EXONUCLEASE VIA ELECTROSTATIC RATCHET**  
Gwangrog Lee<sup>1</sup>, Jungmin Yoo<sup>1</sup>, HyeokJin Cho<sup>1</sup>, Jejoong Yoo<sup>2</sup>  
<sup>1</sup>Korea Advanced Institute of Science and Technology, <sup>2</sup>Sungkyunkwan University

## Poster Sessions

---

---

- 28P-095**      **Single-molecule level tracking of the CCT/TRiC chaperonine mediated functional cycle**  
Kazutaka Araki<sup>1</sup>, Takahiro Watanabe-Nakayama<sup>2</sup>, Daisuke Sasaki<sup>3</sup>, Yuji Sasaki<sup>3</sup>, Kazuhiro Mio<sup>1</sup>  
<sup>1</sup>OPERANDO-OIL, AIST, Chiba, Japan, <sup>2</sup>WPI-NanoLSI, Kanazawa University, Kanazawa, Japan, <sup>3</sup>Graduate School of Frontier Sciences, The University of Tokyo, 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<sup>1</sup>, Byungju Kim<sup>2</sup>, Yeongkyoung Park<sup>3,4</sup>, Yoonki Kim<sup>3,4</sup>, Jongbong Lee<sup>1,2</sup>  
<sup>1</sup>School of Interdisciplinary Bioscience and Bioengineering, POSTECH, Republic of Korea, <sup>2</sup>Physics, POSTECH, Republic of Korea, <sup>3</sup>Creative Research Initiatives Center for Molecular biology of Translation, Korea University, Republic of Korea, <sup>4</sup>School of Life Sciences, Korea University, Republic of Korea

### 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 Ca<sup>2+</sup> entry**  
Tareg Omer Mohammed<sup>1</sup>, You-Rong Lin<sup>1</sup>, Kai Weissenbruch<sup>2</sup>, Kien Xuan Ngo<sup>1</sup>, Yanjun Zhang<sup>1</sup>, Noriyuki Kodera<sup>1</sup>, Martin Bastmeyer<sup>2,3</sup>, Yusuke Miyanari<sup>1,4</sup>, Azuma Taoka<sup>1,5</sup>, Clemens M. Franz<sup>1</sup>  
<sup>1</sup>WPI Nano Life Science Institute, Kanazawa University, Kanazawa, Japan, <sup>2</sup>Cell and Neurobiology, Zoological Institute, Karlsruhe Institute of Technology, Karlsruhe, Germany, <sup>3</sup>Institute for Biological and Chemical Systems – Biological Information Processing, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany, <sup>4</sup>Cancer Research Institute, Kanazawa University, Kanazawa, Japan, <sup>5</sup>Institute of Science and Engineering, 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<sup>1</sup>, Sai Venkata Ramana<sup>1</sup>, Albert Bae<sup>2</sup>  
<sup>1</sup>NYU Abu Dhabi, UAE, <sup>2</sup>Lewis & Clark College, Portland, Oregon, USA
- 28P-103** **Symbiotic bacteria break through narrow passage by flagellar wrapping**  
Aoba Yoshioka<sup>1</sup>, Tetsuo Kan<sup>2</sup>, Kazutaka Takeshita<sup>3</sup>, Hirofumi Wada<sup>4</sup>, Yoshitomo Kikuchi<sup>5</sup>, Daisuke Nakane<sup>1</sup>  
<sup>1</sup>Department of Engineering Science, The University of Electro-Communications, <sup>2</sup>Department of Mechanical and Intelligent Systems Engineering, The University of Electro-Communications, <sup>3</sup>Department of Biotechnology, Faculty of Bioresource Sciences, Akita Prefectural University, <sup>4</sup>Department of Physical Sciences, Ritsumeikan University, <sup>5</sup>Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology
- 28P-104** **The effect of TGF- $\beta$ -induced EMT on the establishment of epithelial collective migration**  
Tomoaki Nagai<sup>1</sup>, Hirokazu Kaji<sup>2</sup>, Michiru Nishita<sup>1</sup>  
<sup>1</sup>Department of Biochemistry, Fukushima Medical University School of Medicine, <sup>2</sup>Department of Diagnostic and Therapeutic Systems Engineering, Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University
- 28P-106** **Characteristics and mechanics of the crawling of the tested amoeba *Arcella* sp.**  
Genta Matsumoto<sup>1</sup>, Katsuhiko Sato<sup>1,2</sup>, Toshiyuki Nakagaki<sup>1,2</sup>, Yukinori Nishigami<sup>1,2</sup>  
<sup>1</sup>Graduate School of Life Science, Hokkaido University, Sapporo, Japan, <sup>2</sup>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<sup>1</sup>, Yukinori Nishigami<sup>2,3</sup>, Hisanori Fujiwara<sup>4</sup>, Satoru Kidoaki<sup>1</sup>, Masatoshi Ichikawa<sup>4</sup>  
<sup>1</sup>Department of Physics, Kyushu University, Japan, <sup>2</sup>Global Station for Soft Matter, Global Institution for Collaborative Research and Education, Hokkaido University, Japan, <sup>3</sup>Research Institute for Electronic Science, Japan, <sup>4</sup>Department of Physics, Kyoto University, Japan

## Poster Sessions

---

---

- 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<sup>1</sup>, Kenta Ishibashi<sup>1</sup>, Hiroyuki Iwamoto<sup>2</sup>, Hiroaki Kojima<sup>1</sup>, Kazuhiro Oiwa<sup>1,3</sup>  
<sup>1</sup>Bio-ICT Lab. NICT, Hyogo, Japan, <sup>2</sup>Spring-8, JASRI, Hyogo, Japan, <sup>3</sup>Life Sci. Univ. Hyogo, 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<sup>1</sup>, Daisuke Nakane<sup>2</sup>, Takayuki Nishizaka<sup>1</sup>  
<sup>1</sup>Gakushuin University, <sup>2</sup>University of Electro-Communications
- 28P-113**      **Functional exploration of Candidatus Izimaplasma MreB using the minimal synthetic bacterium JCVI-syn3B.**  
Ryu Takaishi, Mone Mimura, Hana Kiyama, Makoto Miyata  
Osaka Metropolitan University

### Cell biology: Cytoskeleton & Membrane skeleton

- 28P-114**      **Preparation of Dictyostelium discoideum NAA80 knockout strain**  
Tomoko Tsuji<sup>1</sup>, Akira Nagasaki<sup>2</sup>, Taro Uyeda<sup>1</sup>  
<sup>1</sup>Department of Physics, Faculty of Advanced Science and Engineering, Waseda University, Tokyo, Japan, <sup>2</sup>Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology, Ibaraki, Japan

- 28P-115**      **Visualization of intracellular structure of *D. discoideum* during unicellular and multicellular phases**  
Yuki Gomibuchi, Yukihiisa 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<sup>1</sup>, Tomohiro Shima<sup>2</sup>, Yasushi Okada<sup>3,4,5</sup>, Hiroyuki Iwamoto<sup>6</sup>  
<sup>1</sup>Department of Biological Sciences, Faculty of Science and Engineering, Chuo University, Tokyo, Japan, <sup>2</sup>Department of Biological Sciences, Graduate School of Science, The University of Tokyo, Tokyo, Japan, <sup>3</sup>Laboratory for Cell Polarity Regulation, RIKEN Center for Biosystems Dynamics Research, Osaka, Japan, <sup>4</sup>Department of Cell Biology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan, <sup>5</sup>Department of Physics, Universal Biology Institute and the International, Research Center for Neurointelligence, The University of Tokyo, Tokyo, Japan, <sup>6</sup>Scattering and Imaging Division, SPring-8, Japan Synchrotron Radiation Research Institute, Hyogo, Japan

## Cell biology: Signal transduction & Cell membrane

- 28P-120**      **Application of Single-Molecule Tracking to Drug Discovery**  
Daisuke Watanabe<sup>1,2</sup>, Michio Hiroshima<sup>1,2</sup>, Masahiro Ueda<sup>1,2</sup>  
<sup>1</sup>Laboratory of Single Molecule Biology, Graduate School of Frontier Biosciences, Osaka University; Suita, Osaka, Japan, <sup>2</sup>Laboratory for Cell Signaling Dynamics, Center for Biosystems Dynamics Research, RIKEN; Suita, Osaka, Japan

## Poster Sessions

---

**28P-121 Investigation of cellular localization of opioid receptors: A combined biochemical assay and microscopy study**

Ming Chi Chen<sup>1</sup>, Guan Yu Zhuo<sup>1</sup>, Tzu Yu Lin<sup>2</sup>, Shih Ting Lin<sup>3</sup>, Daniel Tzu Li Chen<sup>4,5</sup>, Cynthia Wei Sheng Lee<sup>2,5</sup>

<sup>1</sup>Institute of Translational Medicine and New Drug Development, China Medical University, Taichung 40402, Taiwan, <sup>2</sup>Center for Drug Abuse and Addiction, China Medical University Hospital, Taichung 40447, Taiwan, <sup>3</sup>Integrative Stem Cell Center, China Medical University Hospital, Taichung 40447, Taiwan, <sup>4</sup>School of Chinese Medicine, China Medical University, Taichung 40402, Taiwan, <sup>5</sup>Graduate Institute of Biomedical Sciences, 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<sup>1</sup>, Yoshikazu Masaki<sup>2</sup>, Kazuma Yasuhara<sup>2</sup>  
<sup>1</sup>Osaka University, <sup>2</sup>Nara Institute of Science and Technology

**Friday, June 28**

- 28P-126**     **The effect of different lateral packing stress in acyl chains on KcsA orientation and structure in lipid bilayer**  
Eri Saki H. Hayakawa<sup>1</sup>, Misuzu Ueki<sup>2</sup>, Elmukhtar Alhatmi<sup>3</sup>, Shigetoshi Oiki<sup>4</sup>, Fuyuki Tokumasu<sup>5</sup>, Masayuki Iwamoto<sup>2</sup>, Drake C. Mitchell<sup>3</sup>  
<sup>1</sup>Div. of Medical Zoology, Dept. of Infection and Immunity, Jichi Medical Univ., <sup>2</sup>Div. of Molecular Neuroscience, Faculty of Medical Sciences, Univ. of Fukui, <sup>3</sup>Dept. of Physics, Portland State Univ., <sup>4</sup>Biomedical Imaging Research Center, Univ. of Fukui, <sup>5</sup>Dept. of Cellular Architecture Studies, Institute of Tropical Medicine (NEKKEN), Nagasaki 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<sup>1</sup>, Nicolas Gisch<sup>2</sup>, Wilmar Correa<sup>3</sup>, Walter Richter<sup>4</sup>, Guillermo Martinez-de-Tejada<sup>5</sup>, Klaus Brandenburg<sup>6</sup>, Friedrich von Wintzingerode<sup>7</sup>  
<sup>1</sup>Division of Immunobiophysics, Research Center Borstel, Leibniz Lung Center, Borstel, Germany, <sup>2</sup>Division of Bioanalytical Chemistry, Research Center Borstel, Leibniz Lung Center, Borstel, Germany, <sup>3</sup>Division of Biophysics, Research Center Borstel, Leibniz Lung Center, Borstel, Germany, <sup>4</sup>Electron Microscopy Centre, University Hospital Jena, Jena, Germany, <sup>5</sup>Department of Microbiology and Parasitology, University of Navarra, Pamplona, Spain, <sup>6</sup>Brandenburg Antiinfektiva GmbH, Borstel, Germany, <sup>7</sup>Genentech, Inc. A member of the Roche Group, South San Francisco, CA, USA

**Biological & Artificial membrane: Dynamics**

- 28P-128**     **Non-equilibrium patterns in phase-separated lipid membranes under shear flow**  
Tsutomu Hamada<sup>1</sup>, Shino Mizuno<sup>1</sup>, Hiroyuki Kitahata<sup>2</sup>  
<sup>1</sup>Japan Advanced Institute of Science and Technology, <sup>2</sup>Chiba University

**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

# Poster Sessions

---

---

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

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

**Membraneless Organelle, 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<sup>1</sup>, Rinat Sharipov<sup>2</sup>

<sup>1</sup>Laboratory of Protein Structural Dynamics, Stability and Folding, Institute of Cytology, St. Petersburg, 194064, Russia, <sup>2</sup>Institute of General Pathology and Pathophysiology, Moscow, Baltiskaya st., 8, 125315 Russia

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

Tatsuyuki Waizumi<sup>1</sup>, Hiroki Sakuta<sup>2</sup>, Mahito Kikumoto<sup>1</sup>, Masahito Hayashi<sup>3</sup>, Kanta Tsumoto<sup>4</sup>, Kingo Takiguchi<sup>1</sup>, Kenichi Yoshikawa<sup>5</sup>

<sup>1</sup>Grad. Sch. Sci., Nagoya Univ., <sup>2</sup>Grad. Sch. Arts and Sci., Univ. Tokyo, <sup>3</sup>Dept. Frontier Bio. Sci., Hosei Univ., <sup>4</sup>Grad. Sch. Eng., Mie Univ., <sup>5</sup>Sci Ctr. Self-Organization., Doshisha Univ.

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

Ryo Mizuuchi<sup>1,2</sup>, Hidekazu Sono<sup>1</sup>, Keiji Murayama<sup>3</sup>, Norikazu Ichihashi<sup>4,5,6</sup>

<sup>1</sup>Department of Electrical Engineering and Bioscience, Faculty of Science and Engineering, Waseda University, Tokyo, Japan, <sup>2</sup>JST, FOREST, Saitama, Japan, <sup>3</sup>Department of Biomolecular Engineering, Graduate School of Engineering, Nagoya University, Nagoya, Japan, <sup>4</sup>Komaba Institute for Science, The University of Tokyo, Tokyo, Japan, <sup>5</sup>Department of Life Science, Graduate School of Arts and Science, The University of Tokyo, Tokyo, Japan, <sup>6</sup>Universal Biology Institute, The University of Tokyo, Tokyo, Japan

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

Yutaro Shiramasa<sup>1</sup>, Ryu Yamamoto<sup>1</sup>, Fuka Sasaki<sup>1</sup>, Soichiro Kitazawa<sup>2</sup>, Tomoshi Kameda<sup>3</sup>, Ryo Kitahara<sup>1,2</sup>

<sup>1</sup>Graduate School of Pharmacy, Ritsumeikan University, <sup>2</sup>College of Pharmaceutical Sciences, Ritsumeikan University, <sup>3</sup>Artificial Intelligence Research Center, National Institute of Advanced Industrial Science and Technology (AIST)



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

Songtao Ye<sup>1</sup>, Chia-Heng Hsiung<sup>1</sup>, Andrew Latham<sup>2</sup>, Bin Zhang<sup>2</sup>,  
[Xin Zhang](#)<sup>1</sup>

<sup>1</sup>Department of Chemistry, Westlake University, 600 Dunyu Road, Hangzhou 310030, Zhejiang Province, China, <sup>2</sup>Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA 02139

## 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](#)<sup>1</sup>, Norihiro Takekawa<sup>1</sup>, So-ichiro Nishiyama<sup>2</sup>,  
Hiroataka Tajima<sup>3</sup>, Ikuro Kawagishi<sup>3</sup>, Katsumi Imada<sup>1</sup>

<sup>1</sup>Dept. of Macromol. Sci., Grad. Sch. of Sci., Osaka Univ., <sup>2</sup>Fac. App. Life Sci., Niigata Univ. Pharm. App. Life Sci., <sup>3</sup>Dept. Front. Biosci., Hosei Univ.

## Neuroscience & Sensory systems

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

[Boxiao Zhao](#)<sup>1</sup>, Akito Hattori<sup>1</sup>, Shigeo Sakuragi<sup>1</sup>, Hiroko Bannai<sup>1</sup>,  
Michisuke Yuzaki<sup>2</sup>

<sup>1</sup>School of Advanced Science and Engineering, Waseda University, Tokyo, Japan, <sup>2</sup>School of Medicine, Keio University, Tokyo, Japan

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

[Shigeo Sakuragi](#)<sup>1</sup>, Akito Hattori<sup>1</sup>, Boxiao Zhao<sup>1</sup>, Yoshihiro Sakata<sup>1</sup>,  
Gen Matsumoto<sup>2</sup>, Akihiko Takashima<sup>3</sup>, Yoshiyuki Soeda<sup>3</sup>,  
Hideaki Yoshimura<sup>4</sup>, Hiroko Bannai<sup>1</sup>

<sup>1</sup>Waseda University, School of Advanced Science and Engineering, <sup>2</sup>Nagasaki University, School of Medicine, <sup>3</sup>Gakushuin University, Faculty of Science, <sup>4</sup>The University of Tokyo, School of Science

# 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<sup>1</sup>, Maki Koike-Tani<sup>2,3</sup>, Tomomi Tani<sup>4</sup>, Takashi Tominaga<sup>1,5</sup>

<sup>1</sup>Inst. of Neurosci., Tokushima Bunri Univ., Sanuki, Japan, <sup>2</sup>Inst. for Open and Transdisciplinary Research Initiatives (OTRI), Osaka Univ. Suita, Japan, <sup>3</sup>Premium Res. Inst. for Human Metaverse Med. (WPI-PRIME), Osaka Univ. Suita, Japan, <sup>4</sup>Biomed. Res. Inst., Natl. Inst. of Advanced Industrial Sci. and Technol. (AIST), Ikeda, Japan, <sup>5</sup>Kagawa Sch. of Pharmaceut. Sci., Tokushima Bunri University, Sanuki, Japan

**28P-142** **Visualizing demyelination effects on interhemispheric communication with voltage-sensitive dye imaging in cuprizone-induced multiple sclerosis model mice**

Kyoka Tsukuda<sup>1,2</sup>, Michiko Miwa<sup>3</sup>, Makiko Taketoshi<sup>2</sup>, Yoko Tominaga<sup>2</sup>, Kentaro Nakashima<sup>1,2,3</sup>, Takashi Tominaga<sup>1,2,3</sup>

<sup>1</sup>Grad. Sch. of Pharm. Sci., Tokushima Bunri Univ., Japan, <sup>2</sup>Inst. of Neurosci., Tokushima Bunri Univ., Japan, <sup>3</sup>Kagawa Sch. of Pharm. Sci., Tokushima Bunri Univ., Japan

## Behavior

**28P-143** **The Implications of microRNA, CaMK2A, and MeCP2 Signaling on Adolescent Cognitive Ability**

Ting-Kuang Yeh<sup>1</sup>, Li-Ching Lee<sup>1</sup>, Pei-Jung Lin<sup>2</sup>, Chun-Yen Chang<sup>1</sup>

<sup>1</sup>National Taiwan Normal University, <sup>2</sup>National Taiwan 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<sup>1</sup>, Keisuke Murabe<sup>1</sup>, Takashi Tsukamoto<sup>1,2</sup>,

Takashi Kikukawa<sup>1,2</sup>

<sup>1</sup>Grad. Sch. Life Sci., Hokkaido Univ., Sapporo, Japan, <sup>2</sup>Fac. Adv. Life Sci., Hokkaido Univ., Sapporo, Japan

- 28P-146**      **Molecular characterization of opsins from a nematode**  
Keiichi Kojima<sup>1</sup>, Yuki Tanioka<sup>2</sup>, Keita Sato<sup>1</sup>, Yosuke Nishimura<sup>3</sup>,  
 Susumu Yoshizawa<sup>4</sup>, Hideyo Ohuchi<sup>1</sup>, Takahiro Yamashita<sup>5</sup>, Yuki Sudo<sup>1</sup>  
<sup>1</sup>Fac. Med. Dent. Pharm. Sci. Okayama Univ., Okayama, Japan, <sup>2</sup>Sch. Pharm. Sci. Okayama Univ., Okayama, Japan, <sup>3</sup>CeBN, JAMSTEC, Kanagawa, Japan, <sup>4</sup>AORI, Univ. Tokyo, Chiba, Japan, <sup>5</sup>Grad. Sch. Sci., Kyoto Univ, Kyoto, Japan
- 28P-147**      **Study on the Mechanisms of High Fluorescence of Archaeorhodopsin-3 (AR3) Mutants**  
Masae Konno<sup>1</sup>, Krystyna Herasymenko<sup>2</sup>, Stefan Haacke<sup>2</sup>, Keiichi Inoue<sup>1</sup>  
<sup>1</sup>The Institute for Solid State Physics, University of Tokyo, Japan, <sup>2</sup>University of Strasbourg - CNRS, Strasbourg Institute of Material Physics and Chemistry, France
- 28P-148**      **Analysis of the mechanism of photoreceptor RcPYP complex formation**  
Yoichi Yamazaki<sup>1</sup>, Yuna Kawabuchi<sup>1</sup>, Kento Yonezawa<sup>1,2</sup>,  
 Sachiko Toma-Fukai<sup>1</sup>, Hironari Kamikubo<sup>1,2</sup>  
<sup>1</sup>Division of Materials Science, Nara Institute of Science and Technology, <sup>2</sup>Center for Digital Green-innovation, Nara Institute of Science and Technology
- 28P-149**      **Driving force of proton pump rhodopsins revealed by electrophysiological study**  
Satoshi Tsunoda<sup>1,2</sup>, Akari Okuyama<sup>1</sup>, Shoko Hososhima<sup>1,2</sup>, Hideki Kandori<sup>1,2</sup>  
<sup>1</sup>Graduate School of Engineering, Nagoya Institute of Technology, Nagoya, Japan, <sup>2</sup>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<sup>1</sup>, Toshio Nagashima<sup>2</sup>, Toshio Yamazaki<sup>2</sup>, Kota Katayama<sup>3</sup>,  
 Hideki Kandori<sup>3</sup>, Izuru Kawamura<sup>1</sup>  
<sup>1</sup>Yokohama National University, <sup>2</sup>RIKEN RSC, <sup>3</sup>Nagoya Institute of Technology
- 28P-151**      **Characterization of the magnetic and geometrical structure of radical pairs in Serum Albumin by electron spin resonance**  
Hiroki Nagashima<sup>1,2</sup>, Masaki Kashiwazaki<sup>1</sup>, Shuhei Arai<sup>1</sup>, Kiminori Maeda<sup>1</sup>  
<sup>1</sup>Graduate School of Science and Engineering, Saitama University, <sup>2</sup>Institute for Quantum Science and Technology, National institutes for Quantum Science and Technology

## Poster Sessions

---

---

**28P-152**      **Novel green/red light-sensing mechanism in the phytochrome-superfamily protein**

Takayuki Nagae<sup>1</sup>, Yuya Fujita<sup>2</sup>, Tatsuya Tsuchida<sup>3</sup>, Takanari Kamo<sup>2</sup>, Ryoka Seto<sup>4</sup>, Masako Hamada<sup>2</sup>, Hiroshi Aoyama<sup>1</sup>, Ayana Sato-Tomita<sup>5</sup>, Tomotsumi Fujisawa<sup>4</sup>, Toshihiko Eki<sup>2</sup>, Yohei Miyanoiri<sup>6</sup>, Yutaka Ito<sup>7</sup>, Takahiro Soeta<sup>3</sup>, Yutaka Ukaji<sup>3</sup>, Masashi Unno<sup>4</sup>, Masaki Mishima<sup>1</sup>, Yuu Hirose<sup>2</sup>

<sup>1</sup>Tokyo University of Pharmacy and Life Sciences, <sup>2</sup>Toyohashi University of Technology, <sup>3</sup>Kanazawa University, <sup>4</sup>Saga University, <sup>5</sup>Jichi Medical University, <sup>6</sup>Osaka University, <sup>7</sup>Tokyo City University

### Photobiology: Photosynthesis

**28P-153**      **Molecular Docking Simulations at Quinone Binding Site in Photosynthetic Reaction Centers**

Ayumu Takagi<sup>1</sup>, Shigeru Itoh<sup>2</sup>, Akihiro Kimura<sup>2</sup>, Hirotaka Kitoh<sup>1</sup>

<sup>1</sup>Grad. Sch. Sci. Eng., Kindai Univ., <sup>2</sup>Dept. Phys., Grad. Sch. Sci., Nagoya Univ.

**28P-154**      **Fluorescence spectra of a photosynthetic carbonyl carotenoid, siphonaxanthin: Dual fluorescence observed only at ambient temperature in polar solvents**

Kazuhiro Yoshida<sup>1</sup>, Soichiro Seki<sup>2</sup>, Yumiko Yamano<sup>3</sup>, Tetsuichi Wazawa<sup>4</sup>, Takeharu Nagai<sup>4</sup>, Ritsuko Fujii<sup>1,2,5</sup>

<sup>1</sup>Grad. Sch. Sci., Osaka Metropolitan Univ., Osaka, Japan, <sup>2</sup>Grad. Sch. Sci., Osaka City Univ., Osaka, Japan, <sup>3</sup>Kobe Pharmaceutical Univ., Kobe, Japan, <sup>4</sup>SANKEN, Osaka Univ., Osaka, Japan, <sup>5</sup>ReCAP, Osaka Metropolitan Univ., Osaka, Japan

**28P-155**      **Cryo-EM structure of marine green algal LHCII utilizing blue-green light**

Soichiro Seki<sup>1</sup>, Tetsuko Nakaniwa<sup>2</sup>, Pablo Castro-Hartmann<sup>3</sup>, Kasim Sader<sup>3</sup>, Akihiro Kawamoto<sup>2,4</sup>, Hideaki Tanaka Tanaka<sup>2,4</sup>, Qian Pu<sup>3</sup>, Genji Kurisu<sup>2,4</sup>, Ritsuko Fujii<sup>1,5</sup>

<sup>1</sup>Division of Molecular Materials Science, Graduate School of Science, Osaka City University, 3-3-138, Sugimoto, Sumiyoshi-ku, Osaka 558-8585, Japan, <sup>2</sup>Institute for Protein Research, Osaka University, Suita, Osaka 565-0871, Japan, <sup>3</sup>Materials and Structural Analysis, Thermo Fisher Scientific, Achtseweg Noord 5, 5651 GG Eindhoven, Netherlands, <sup>4</sup>Institute for Open and Transdisciplinary Research Initiatives (OTRI), Osaka University, Suita, Osaka 565-9871, Japan, <sup>5</sup>Research Center for Artificial Photosynthesis (ReCAP), Osaka Metropolitan 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., Muroran 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<sup>1</sup>, Ziyun Zhang<sup>1</sup>, Kazunori Kondoh<sup>2</sup>, Shinsaku Maruta<sup>1,2</sup>  
<sup>1</sup>Department of Biosciences, Graduate School of Science and Engineering, Soka University Hachioji, Tokyo Japan, <sup>2</sup>Department of Science and Engineering for Sustainable Innovation, Faculty of Science and Engineering, Soka University, Hachioji, Tokyo Japan
- 28P-161**      **Electrophysiological characterization of light-activated proton-transporting heliorhodopsins**  
Shoko Hososhima<sup>1,2</sup>, Satoshi Tsunoda<sup>1,2</sup>, Hideki Kandori<sup>1,2</sup>  
<sup>1</sup>Department of Life Science and Applied Chemistry, Nagoya Institute of Technology, Showa-ku, Nagoya 466-8555, Japan, <sup>2</sup>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

# Poster Sessions

---

---

## Radiobiology & Active oxygen

**28P-163**     **YAP/Aurora A-mediated ciliogenesis regulates ionizing radiation-induced senescence via Hedgehog pathway in tumor cells**

Jinpeng He<sup>1,3</sup>, Wei Ma<sup>1,3</sup>, Li Wei<sup>2</sup>, Tongshan Zhang<sup>1,3</sup>, Junrui Hua<sup>1</sup>, Jufang Wang<sup>1,3</sup>

<sup>1</sup>Institute of Modern Physics, Chinese Academy of Sciences, <sup>2</sup>Gansu Provincial Hospital, <sup>3</sup>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

## Origin of life & Evolution

**28P-165**     **Analysis of evolutionary constraints using bacterial experimental evolution**

Astushi Shibai<sup>1</sup>, Sumpei Sato<sup>1</sup>, Chikara Furusawa<sup>1,2</sup>

<sup>1</sup>Center for Biosystems Dynamics Research, RIKEN, <sup>2</sup>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 from 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<sup>1,2,3</sup>  
<sup>1</sup>Hakubi Center for Advanced Research, Kyoto University, Kyoto, Japan,, <sup>2</sup>School of Engineering, Kyoto University, Kyoto, Japan, <sup>3</sup>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<sup>1,2</sup>, Tomoyuki Kaneko<sup>1,2</sup>  
<sup>1</sup>LaRC, Dept. Frontier Biosci. Hosei Univ., Tokyo, Japan, <sup>2</sup>LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ Tokyo, Japan
- 28P-173**      **Pattern diversity emerges from a simple gene network**  
Xiongfei Fu<sup>1,2</sup>, Jingwen Zhu<sup>1</sup>, Pan Chu<sup>1,2</sup>  
<sup>1</sup>Key Laboratory for Quantitative Synthetic Biology, Shenzhen Institute of Synthetic Biology, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen 518055, China, <sup>2</sup>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<sup>1,2</sup>, Hisashi Miura<sup>3</sup>, Ichiro Hiratani<sup>3</sup>, Takeshi Fukuma<sup>2</sup>  
<sup>1</sup>PERSTO, JST, <sup>2</sup>Kanazawa University, <sup>3</sup>RIKEN BDR

# Poster Sessions

## 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<sup>1</sup>, Kenji Etchuya<sup>2</sup>, Ikuo Masuho<sup>3,4</sup>, Makiko Suwa<sup>1,2</sup>  
<sup>1</sup>Biol. Sci., Grad. Sci. Eng., Aoyama Gakuin Univ., Kanagawa, Japan., <sup>2</sup>Chem. Biol. Sci., Dept. Sci. Eng., Aoyama Gakuin Univ., Kanagawa, Japan., <sup>3</sup>Pediatrics and Rare Diseases Group, Sanford Research, Sioux Falls, South Dakota 57104, USA., <sup>4</sup>Department of Pediatrics, Sanford School of Medicine, University of South Dakota, Sioux Falls, South Dakota 57105, USA.
- 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
- 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<sup>1,2</sup>, Satoko Akashi<sup>2</sup>, Sotaro Fuchigami<sup>3</sup>  
<sup>1</sup>National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology, <sup>2</sup>Graduate School of Medical Life Science, Yokohama City University, <sup>3</sup>School of Pharmaceutical Sciences, University of Shizuoka



- 28P-183**      **2D-replica exchange simulation of membrane permeation process of cyclic hexapeptides**  
Tsutomu Yamane<sup>1</sup>, Masateru Ota<sup>1</sup>, Mitsunori Ikeguchi<sup>1,2</sup>  
<sup>1</sup>Riken Center for Computational Science, <sup>2</sup>Graduate School of Medical Life Science, Yokohama City University
- 28P-184**      **Classification of conformational dynamics of high mannose- type oligosaccharides by molecular simulation and data clustering**  
Yue Zhang<sup>1</sup>, Takumi Yamaguchi<sup>1,2,3</sup>  
<sup>1</sup>School of Materials Science, Japan Advanced Institute of Science and Technology, <sup>2</sup>Graduate School of Pharmaceutical Sciences, Nagoya City University, <sup>3</sup>Exploratory Research Center on Life and Living Systems (ExCELLS), National Institutes of Natural Sciences
- 28P-185**      **The role of water and cholesterols in APP cleavage by gamma-secretase**  
Jinyoung Byun<sup>1</sup>, Juyong Lee<sup>1,2</sup>  
<sup>1</sup>College of Pharmacy, Seoul National University, Seoul, Republic of Korea, <sup>2</sup>Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology, and College of Medicine, Seoul National University
- 28P-186**      **Decoupling processes of the Adenosine A2A receptor from G-proteins through the lens of dPaCS-MD simulations**  
Duy Phuoc Tran<sup>1</sup>, Louis-Philippe Picard<sup>2</sup>, Alexander Oraziatti<sup>3</sup>, Sari Hagimoto<sup>1</sup>, Adnan Sljoka<sup>4,5</sup>, R. Scott Prosser<sup>2,3</sup>, Akio Kitao<sup>1</sup>  
<sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, Tokyo 152-8550, Japan, <sup>2</sup>Department of Chemical and Physical Sciences, University of Toronto, UTM, 3359 Mississauga Road North, Mississauga, Ontario, L5L 1C6, Canada, <sup>3</sup>Department of Biochemistry, University of Toronto, Rm 5207, 1 King's College Circle, Toronto, Ontario, M5S 1A8 Canada, <sup>4</sup>RIKEN, 1-4-1 Nihombashi, Chuo-Ku, Tokyo 103-0027, Japan, <sup>5</sup>York University, Department of Chemistry, Toronto, Canada
- 28P-187**      **PROTAC-mediated ternary complex structure distribution profiles using enhanced sampling methods**  
Genki Kudo<sup>1</sup>, Takumi Hirao<sup>2</sup>, Takatsugu Hirokawa<sup>3,4</sup>, Ryunosuke Yoshino<sup>3,4</sup>  
<sup>1</sup>Physics Department, Graduate School of Pure and Applied Sciences, University of Tsukuba, <sup>2</sup>Master's Program in Medical Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba, <sup>3</sup>Division of Biomedical Science, Faculty of Medicine, University of Tsukuba, <sup>4</sup>Transborder Medical Research Center, University of Tsukuba

# Poster Sessions

---

- 28P-188**      **3D Structure Prediction of the Odorant-bound Olfactory Receptor**  
Takumi Hirao<sup>1</sup>, Yusuke Ihara<sup>2</sup>, Chiori Ijichi<sup>2</sup>, Genki Kudo<sup>3</sup>,  
Ryunosuke Yoshino<sup>4,5</sup>, Takatsugu Hirokawa<sup>4,5</sup>  
<sup>1</sup>Doctoral Program in Medical Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba, <sup>2</sup>Institute of Food Sciences and Technologies, Food Products Division, Ajinomoto Co., <sup>3</sup>Physics Department, Graduate School of Pure and Applied Sciences, University of Tsukuba, <sup>4</sup>Division of Biomedical Science, Faculty of Medicine, University of Tsukuba, <sup>5</sup>Transborder Medical Research Center, University of Tsukuba
- 28P-189**      **Quantitative Evaluation of Protein-Compound Substructure Interaction with Inverse Mixed-Solvent Molecular Dynamics Simulation**  
Keisuke Yanagisawa<sup>1,2</sup>, Ryunosuke Yoshino<sup>3,4</sup>, Genki Kudo<sup>5</sup>,  
Takatsugu Hirokawa<sup>3,4</sup>  
<sup>1</sup>Department of Computer Science, School of Computing, Tokyo Institute of Technology, <sup>2</sup>Middle Molecule IT-based Drug Discovery Laboratory (MIDL), Tokyo Institute of Technology, <sup>3</sup>Faculty of Medicine, University of Tsukuba, <sup>4</sup>Transborder Medical Research Center, University of Tsukuba, <sup>5</sup>Degree Programs in Pure and Applied Sciences, Graduate School of Science and Technology, University of Tsukuba
- 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<sup>1,2</sup>, Yusuke Ohnishi<sup>3</sup>, Hideaki Tanaka<sup>3</sup>, Genji Kurisu<sup>3</sup>,  
Yu Takano<sup>1</sup>  
<sup>1</sup>Graduate School of Information Sciences, Hiroshima City University, <sup>2</sup>Faculty of Pharmacy, Meijo University, <sup>3</sup>Institute for Protein Research, Osaka University

**28P-192**      **Dependence of the abnormal open states patterns in the ATXN2 gen on the number of CAG repeats**

Stepan Dzhimak<sup>1,2</sup>, Mikhail Drobotenko<sup>2</sup>, Oksana Lyasota<sup>1</sup>, Jose Luis Hernandez-Caceres<sup>3</sup>, Yuriy Nechipurenko<sup>4</sup>, Alexandr Svidlov<sup>1</sup>, Anna Dorohova<sup>1</sup>

<sup>1</sup>Laboratory of Problems of Stable Isotope Spreading in Living Systems, Southern Scientific Center of the Russian Academy of Sciences, Rostov-on-Don, Russia,

<sup>2</sup>Department of Radiophysics and Nanotechnology, Kuban State University, Krasnodar, Russia,, <sup>3</sup>Cuban Center for Neurosciences, La Havana, Cuba,

<sup>4</sup>Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, 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

**28P-195**      **Vibrational Dynamics of Water Molecules in FUS Protein Condensates: Molecular Interpretation**

Yotaro Takeda<sup>1</sup>, Tatsuya Ishiyama<sup>2</sup>, Eiji Yamamoto<sup>1</sup>

<sup>1</sup>Department of System Design Engineering, Keio University, Japan, <sup>2</sup>Department of Applied Chemistry, University of Toyama, 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<sup>1,2</sup>

<sup>1</sup>Hoshi University, <sup>2</sup>The University of Tokyo

## Poster Sessions

---

- 28P-198**      **Simulation-based prediction and elucidation of the pathogenic mechanism of deafness in GJB2-encoded Cx26 channel protein**  
Cheng-Yu Tsai<sup>1,2</sup>, Ying-Chang Lu<sup>2</sup>, Yen-Hui Chan<sup>2,3</sup>, Chuan-Jen Hsu<sup>2,3</sup>,  
Pei-Lung Chen<sup>1,4</sup>, Chen-Chi Wu<sup>2</sup>, Lee-Wei Yang<sup>5,6</sup>  
<sup>1</sup>Graduate Institute of Medical Genomics and Proteomics, National Taiwan University College of Medicine, Taipei, Taiwan, <sup>2</sup>Department of Otolaryngology, National Taiwan University Hospital, Taipei, Taiwan, <sup>3</sup>Department of Otolaryngology, Buddhist Tzuchi General Hospital, Taichung, Taiwan, <sup>4</sup>Department of Medical Genetics, National Taiwan University Hospital, Taipei, Taiwan, <sup>5</sup>Institute of Bioinformatics and Structural Biology, National Tsing Hua University, Hsinchu, Taiwan, <sup>6</sup>PhD Program in Biomedical Artificial Intelligence, National Tsing Hua University, Hsinchu, 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<sup>1</sup>, Toru Ekimoto<sup>1</sup>, Tsutomu Yamane<sup>2</sup>, Masao Inoue<sup>1</sup>,  
Naoki Ogawa<sup>1</sup>, Sun-Yong Park<sup>1</sup>, Kei Terayama<sup>1</sup>, Mitsunori Ikeguchi<sup>1,2</sup>  
<sup>1</sup>Yokohama City University, <sup>2</sup>RIKEN R-CCS
- 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<sup>1</sup>, Song-Ho Chong<sup>2</sup>, Isseki Yu<sup>3</sup>, Yuji Sugita<sup>1,4,5</sup>

<sup>1</sup>RIKEN Cluster for Pioneering Research, Wako, Japan, <sup>2</sup>Global Center for Natural Resources Sciences, Faculty of Life Sciences, Kumamoto University, Kumamoto, Japan, <sup>3</sup>Department of Bioinformatics, Maebashi Institute of Technology, Maebashi, Japan, <sup>4</sup>RIKEN Center for Computational Science, Kobe, Japan, <sup>5</sup>RIKEN Center for Biosystems Dynamics Research, Kobe, Japan

**28P-205**      **Developing an IDP-Specific Force Field by Optimizing CMAP Parameters**

Haozhe Guo<sup>1,2</sup>, Chen Song<sup>1,2</sup>

<sup>1</sup>Peking-Tsinghua Center for Life Sciences, Academy for Advanced Interdisciplinary Studies, Peking University, Beijing, China, <sup>2</sup>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<sup>1,2</sup>, Veronika Aleksandrova<sup>1</sup>, Mikhail Anisimov<sup>1,2</sup>

<sup>1</sup>Lomonosov Moscow State University, Moscow, Russia, <sup>2</sup>Center for Theoretical Problems of Physico-Chemical Pharmacology, Russian Academy of Sciences, Moscow, Russia.

**28P-208**      **Analysis of fracture patterns in a vertex model including detachment of cells**

Nozomi Fujita<sup>1</sup>, Yuichi Togashi<sup>1,2</sup>

<sup>1</sup>Ritsumeikan University, <sup>2</sup>RIKEN

**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<sup>1</sup>, Monika Golda-Cepa<sup>1</sup>, Piotr Kubisiak<sup>1</sup>, Waldemar Kulig<sup>2</sup>, Lukasz Cwiklik<sup>3</sup>, Andrzej Kotarba<sup>1</sup>  
<sup>1</sup>Faculty of Chemistry, Jagiellonian University in Krakow, Krakow, Poland, <sup>2</sup>Department of Physics, University of Helsinki, Helsinki, Finland, <sup>3</sup>J. Heyrovsky Institute of Physical Chemistry, Czech Academy of Sciences, Prague, Czech Republic
- 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<sup>1</sup>, Jinung Song<sup>2</sup>, Junsu Ha<sup>3</sup>, Juyong Lee<sup>2</sup>, Junsu Ko<sup>3</sup>  
<sup>1</sup>Department of Biomedical Informatics, Korea University College of Medicine, <sup>2</sup>College of Pharmacy, Seoul National University, <sup>3</sup>Arontier Co.
- 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<sup>3</sup>, Kyosuke Adachi<sup>1,2</sup>  
<sup>1</sup>RIKEN Interdisciplinary Theoretical and Mathematical Sciences Program, <sup>2</sup>RIKEN Center for Biosystems Dynamics Research, <sup>3</sup>Institute for Solid State Physics, University of Tokyo
- 28P-217**      **Searching for the BET interactome through AI and Molecular dynamics simulations**  
Alberto Perez<sup>1,2</sup>  
<sup>1</sup>University of Florida, <sup>2</sup>Riken visiting JSPS fellow

**28P-219 Membrane fusion as a pathway to fission**

Russell k w Spencer, Marcus Müller  
Georg-August Universitat 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<sup>1</sup>, Takayuki Kato<sup>2</sup>  
<sup>1</sup>Graduate School of Frontier Biosciences (FBS), Osaka University, <sup>2</sup>Institute for Protein Research (IPR), Osaka University

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

Yuki Ito<sup>1</sup>, Masateru Ohta<sup>2</sup>, Mitsunori Ikeguchi<sup>2,3</sup>, Takashi Yoshidome<sup>1</sup>  
<sup>1</sup>Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan, <sup>2</sup>AI-Driven Drug Discovery Collaborative Unit, HPC- and AI-Driven Drug Development Platform Division, Center for Computational Science, RIKEN, Japan, <sup>3</sup>Graduate School of Medical Life Science, Yokohama City University, Japan

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

Yiming Gong<sup>1</sup>, Gikyo Usuki<sup>2</sup>, Arif Md. Rashedul Kabir<sup>2</sup>, Kazuki Sada<sup>2,3</sup>, Ibuki Kawamata<sup>1</sup>, Nathanael Aubert-Kato<sup>4</sup>, Masatoshi Ichikawa<sup>1</sup>, Akira Kakugo<sup>1</sup>  
<sup>1</sup>Graduate School of Science, Kyoto University, Kyoto, Japan, <sup>2</sup>Graduate School of Chemical Sciences and Engineering, Hokkaido University, Hokkaido, Japan, <sup>3</sup>Faculty of Science, Hokkaido University, Hokkaido, Japan, <sup>4</sup>Department of Information Sciences, Ochanomizu University, Tokyo, Japan

# Poster Sessions

---

---

## 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

## 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<sup>1</sup>, Biplab Bhattacharjee<sup>1</sup>, Lihao Guo<sup>1</sup>, Hidekazu Kuwayama<sup>2</sup>, Tatsuo Shibata<sup>1</sup>  
<sup>1</sup>Laboratory for Physical Biology, RIKEN Center for Biosystems Dynamics Research, Kobe, Japan, <sup>2</sup>Faculty of Life and Environmental Sciences, University of Tsukuba, Tsukuba, 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

## Poster Sessions

---

---

**28P-237** Measurement of photocatalytic hydrogen production in titanium/manganese oxide film/hydrogenated amorphous silicon thin film stack using flavan molecules

Yutaka Tsujiuchi<sup>1,2</sup>, Kohei Saito<sup>1</sup>, Kazunori Takada<sup>1</sup>, Koyu Akiyama<sup>1</sup>, Hiroshi Masumoto<sup>2</sup>

<sup>1</sup>Akita UNIV, <sup>2</sup>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<sup>1</sup>, Yutaka Tsujiuchi<sup>1,2</sup>, Hiroshi Masumoto<sup>2</sup>

<sup>1</sup>Akita UNIV, <sup>2</sup>Tohoku UNIV

### Bioimaging

**28P-240** Coupling between vinculin and retrograde actin flow visualized by live-cell single-molecule imaging

Ying Liu<sup>1</sup>, Naoki Watanabe<sup>1,2</sup>, Sawako Yamashiro<sup>1,2</sup>

<sup>1</sup>Laboratory of Single-Molecule Cell Biology, Kyoto University Graduate School of Biostudies, Kyoto, Japan, <sup>2</sup>Department of Pharmacology, Kyoto University Faculty of Medicine, 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<sup>1</sup>, Masaharu Takarada<sup>2</sup>, Genki Ishigane<sup>1</sup>, Hiroyuki Shimada<sup>1</sup>, Venkata Ramaiah Badarla<sup>1</sup>, Kohki Okabe<sup>2</sup>, Takuro Ideguchi<sup>1</sup>  
<sup>1</sup>The Univ. of Tokyo (Science), Tokyo, Japan, <sup>2</sup>The Univ. of Tokyo (Pharmacy), Tokyo, Japan
- 28P-245**      **Visualization of exocytosis using video-rate bioluminescence imaging**  
Satoru Yokawa<sup>1</sup>, Shinji Fukuda<sup>2</sup>, Takahiro Suzuki<sup>2</sup>, Tadahide Furuno<sup>1</sup>  
<sup>1</sup>Department of Analytical Chemistry and Biophysics, School of Pharmacy, Aichi Gakuin University, <sup>2</sup>Department of Biochemistry, School of Dentistry, Aichi Gakuin University
- 28P-246**      **Topography considerations for high-speed atomic force microscopy based force mapping on bacteria**  
Christian Ganser<sup>1</sup>, Shigetaka Nishiguchi<sup>2</sup>, Takayuki Uchihashi<sup>1,3</sup>  
<sup>1</sup>National Institutes of Natural Sciences, ExCELLS, <sup>2</sup>Osaka University, Department of Biotechnology, <sup>3</sup>Nagoya University, Department of Physics
- 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<sup>1</sup>, Linhao Sun<sup>2</sup>, Shinya Kumagai<sup>3</sup>, Shinji Watanabe<sup>2</sup>  
<sup>1</sup>Grad. Sch. Nano Life Sci., Kanazawa University, Japan, <sup>2</sup>WPI-NanoLSI, Kanazawa University, Japan, <sup>3</sup>Meijo 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<sup>1</sup>, Yuto Kurisu<sup>2</sup>, Koji Nagaoka<sup>3</sup>, Kazuhiro Kakimi<sup>4</sup>, Takashi Funatsu<sup>2</sup>, Yoshitaka Shirasaki<sup>1</sup>  
<sup>1</sup>RCAST, Univ. Tokyo, <sup>2</sup>Grad. Sch. Pharm. Sci., Univ. Tokyo, <sup>3</sup>Univ. Tokyo Hospital, <sup>4</sup>Faculty of Medicine, Kindai Univ.

## Poster Sessions

---

**28P-251 Advancing Severe Asthma Research through Live-Cell Imaging of Secretion Activity**

Yoshitaka Shirasaki<sup>1</sup>, Mai Yamagishi<sup>2</sup>, Kaede Miyata<sup>3</sup>, Yumiko Tanaka<sup>3</sup>, Hiroki Kabata<sup>4</sup>, Misato Irie<sup>4</sup>, Rie Baba<sup>4</sup>, Takashi Kamatani<sup>4,5,6</sup>, Kazuyo Moro<sup>7</sup>, Koichi Fukunaga<sup>4</sup>, Sotaro Uemura<sup>3</sup>

<sup>1</sup>Research Center for Advanced Science and Technology, The University of Tokyo, <sup>2</sup>Live Cell Diagnosis Ltd., <sup>3</sup>Department of Biological Sciences, Graduate School of Science, The University of Tokyo, <sup>4</sup>Division of Pulmonary Medicine, Department of Medicine, Keio University School of Medicine, <sup>5</sup>Department of AI Technology Development, M&D Data Science Center, Tokyo Medical and Dental University, <sup>6</sup>Division of Precision Cancer Medicine, Tokyo Medical and Dental University Hospital, <sup>7</sup>Laboratory for Innate Immune Systems, Department of Microbiology and Immunology, Graduate School of Medicine, Osaka University

**28P-252 Imaging of mitochondrial ATP in mouse sperm before and after capacitation using AMPK activators and inhibitors**

Takashi W Ijiri<sup>1</sup>, Yuika Asanuma<sup>1</sup>, Masamichi Yamamoto<sup>2</sup>

<sup>1</sup>Setsunan University, <sup>2</sup>National Cerebral Cardiovascular Center

**28P-253 Numerous-color simultaneous imaging with dozens of bioluminescence colors**

Mitsuru Hattori<sup>1</sup>, Yuki Hiruta<sup>2</sup>, Takeharu Nagai<sup>1</sup>

<sup>1</sup>SANKEN, Osaka University, Japan, <sup>2</sup>Department of Applied Chemistry Faculty of Science and Technology, Keio University, Japan

### 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<sup>2</sup>, Yoshihiro Minagawa<sup>1</sup>, Hiroyuki Noji<sup>1</sup>

<sup>1</sup>The University of Tokyo, Tokyo, Japan, <sup>2</sup>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<sup>1</sup>, Pooja Badgujar<sup>1</sup>, Pei-Yang Huang<sup>1</sup>,  
Artashes Karmenyan<sup>1</sup>, Viktor Nikolayev<sup>2</sup>, Jiun-Hong Chen<sup>3</sup>

<sup>1</sup>Department of Physics, National Dong Hwa University, Hualien 97401, Taiwan,

<sup>2</sup>Department of Physics, Tomsk State University, Tomsk Oblast, 634050, Russia,

<sup>3</sup>Department of Life Sciences, National Taiwan University, Taipei, 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<sup>1</sup>, Yuki Miyata<sup>1</sup>, Yosuke Tsuboyama<sup>1</sup>, Yuki Fujii<sup>1</sup>,  
Takaharu Okajima<sup>2</sup>

<sup>1</sup>Graduate School of Information Science and Technology, Hokkaido University,

<sup>2</sup>Faculty of Information Science and Technology, Hokkaido University

## Crystal growth & Crystallization technique

**28P-260 Assembly of Cage-Shaped Protein Dps Using Functional Peptides**

Mitsuhiro Okuda<sup>1,2,3</sup>, Gabriela Pretre<sup>2,3</sup>

<sup>1</sup>Meiji University, <sup>2</sup>CIC-nanoGUNE, <sup>3</sup>Komie Corp.

# Poster Sessions

## Virus structure, function, SARS-CoV-2

### **28P-261 Rational in silico design and structure analysis of SARS-CoV-2 neutralizing antibody UT28K**

Shunsuke Kita<sup>1</sup>, Tatsuhiko Ozawa<sup>2,3</sup>, Kouki Ikeda<sup>4</sup>, Luan Chen<sup>1</sup>, Yuki Anraku<sup>1</sup>, Hideo Fukuhara<sup>1</sup>, Emiko Igarashi<sup>5</sup>, Yumiko Saga<sup>5</sup>, Noriko Inasaki<sup>5</sup>, Jiei Sasaki<sup>6</sup>, Yuhei Kirita<sup>7</sup>, Takao Hashiguchi<sup>6</sup>, Hideki Tani<sup>5</sup>, Hiroyuki Kishi<sup>2,3</sup>, Hideki Niimi<sup>2,3</sup>, Katsumi Maenaka<sup>1</sup>

<sup>1</sup>Facul. Pharm. Sci., Hokkaido Univ., Japan, <sup>2</sup>Facul. Med., Univ. of Toyama, Japan, <sup>3</sup>Center for Advanced Antibody Drug Development, Univ. of Toyama, Japan, <sup>4</sup>iCeMS, Kyoto Univ., Japan, <sup>5</sup>Department of Virology, Toyama Institute of Health, Japan, <sup>6</sup>LiMe, Kyoto Univ., Kyoto, Japan, <sup>7</sup>Grad. Sch. Med. Sci., Kyoto Prefectural University of Medicine, Kyoto, Japan

### **28P-262 Verification of the effect of ligand and receptor flexibility on inhibitory activity by MD simulation**

Suzuka Saito<sup>1</sup>, Masashi Muramoto<sup>1</sup>, Simon Hikiri<sup>2</sup>, Junichi Higo<sup>3</sup>, Takuya Takahashi<sup>2</sup>

<sup>1</sup>Graduate School of Life Sciences, Ritsumeikan University, Kusatsu, Japan., <sup>2</sup>College of Life Sciences, Ritsumeikan University, Kusatsu, Japan., <sup>3</sup>Graduate School of Information Science, University of Hyogo, Kobe, Japan.

### **28P-263 N-substituted anthranilic acid derivatives as PPI inhibitors between Syntenin-1 PDZ domain and SARS-CoV-2 Env protein**

Hidekazu Hiroaki<sup>1,4,5</sup>, Ryusei Hamajima<sup>1</sup>, Youichi Suzuki<sup>2</sup>, Eiji Morita<sup>3</sup>, Hong Wu<sup>2</sup>, Yoshihiko Fujioka<sup>2</sup>, Takeshi Tenno<sup>1,5</sup>

<sup>1</sup>Graduate School of Pharmaceutical Sciences, Nagoya University, <sup>2</sup>Department of Microbiology and Infection Control, Faculty of Medicine, Osaka Medical and Pharmaceutical University, <sup>3</sup>Faculty of Agriculture and Life Science, Hirosaki University, <sup>4</sup>Center for One Medicine Innovative Translational Research, Tokai National Higher Education and Research System, <sup>5</sup>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<sup>1</sup>, Takeshi Nomura<sup>2</sup>, Masahiro Sokabe<sup>3</sup>  
<sup>1</sup>Institute of Materials Innovation, Institutes of Innovation for Future Society, Nagoya University, <sup>2</sup>School of Human Science and Environment, University of Hyogo, <sup>3</sup>Human Information Systems Laboratory, Kanazawa Institute of Technology
- 28P-266**      **Activation of chloride ion channel CLIC1 by mechanical external force using AFM in breast cancer cell**  
Ayana Yamagishi<sup>1,2</sup>, Samrat Mukherjee<sup>1,2</sup>, Chikashi Nakamura<sup>1,2</sup>  
<sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST), <sup>2</sup>Tokyo University of Agriculture and Technology
- 28P-267**      **Mechanical properties of nestin tail domain analyzed by tensile test using AFM**  
Ayana Yamagishi<sup>1,2</sup>, Rina Tokuoka<sup>1,2</sup>, Daijiro Takeshita<sup>1</sup>, Chiaki Yoshikawa<sup>3</sup>, Tomohiko Yamazaki<sup>3</sup>, Taro Uyeda<sup>4</sup>, Chikashi Nakamura<sup>1,2</sup>  
<sup>1</sup>AIST, <sup>2</sup>Tokyo University of Agriculture and Technology, <sup>3</sup>National Institute for Materials Science, <sup>4</sup>Waseda University
- 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<sup>1</sup>, Valeri Maltsev<sup>1</sup>, Gleb Moroz<sup>2</sup>  
<sup>1</sup>V.V. Voevodsky Institute of Chemical Kinetics and Combustion of the Siberian Branch of the RAS, <sup>2</sup>Novosibirsk Research Institute of Circulation Pathology

# Poster Sessions

---

---

**28P-270**      **Morphology of Cancer Organoids Reproduced by 3D Phase-Field Model**

Kotaro Kawamura<sup>1</sup>, Toshikaze Chiba<sup>1</sup>, Keita Yanagiya<sup>1</sup>, Yutaka Oya<sup>2</sup>,  
Toshihiro Kawakatsu<sup>1</sup>, Tatsuaki Tsuruyama<sup>1</sup>, Masayuki Imai<sup>1</sup>

<sup>1</sup>Department of Physics, Tohoku University, Aoba, Sendai, Japan, <sup>2</sup>Department of Materials Science and Technology, Tokyo University of Science, Katsushika, Tokyo, 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

**28P-272**      **Interactions of Model Antimicrobial Peptides with Lipid Membranes**

Normand Voyer<sup>1</sup>, Pierre-Alexandre Paquet-Côté<sup>1</sup>, François Otis<sup>1</sup>,  
Jochen Bürck<sup>2</sup>, Patrick Lagüe<sup>3</sup>, Anne S. Ulrich<sup>2</sup>

<sup>1</sup>Département de chimie and PROTEO, Université Laval, Québec, Canada,  
<sup>2</sup>Institute of Biological Interfaces (IBG-2), Karlsruhe Institute of Technology (KIT),  
Karlsruhe, Germany, <sup>3</sup>Département de biochimie et de microbiologie and PROTEO,  
Université Laval, Québec, Canada



# Sponsored Seminar

---

## Sponsored Seminar

Tuesday, June 25

**Morning Seminar 1 (Avanti Polar Lipids)**

Room A

8:00-8:50

**Delicious Molecules: A Primer on Lipids and Membrane Biophysics**

Chairs

Roberto Covino (Frankfurt Institute for Advanced Studies, Germany)

Chiho Watanabe (Hiroshima University, Japan)

**MS1-1**Roberto Covino<sup>1</sup>, Chiho Watanabe<sup>2</sup><sup>1</sup>Frankfurt Institute for Advanced Studies, Frankfurt am Main, Germany, <sup>2</sup>Graduate School of Integrated Life Sciences, Hiroshima University, Hiroshima, Japan**BP Seminar 1 (JEOL Ltd.)**

Room A

12:35-13:35

**Microscope Technology that Realizes Structural Biology**

Chair

Akio Sekigawa (JEOL Ltd.)

**BP1-1****Introduction of high throughput and high flexible workflows of cryo-TEM**

Naoki Hosogi

JEOL Ltd., Tokyo, Japan

**BP1-2****Introduction of newly developed cryo-FIB for cryo-TEM**Noriaki Mizuno<sup>1</sup>, Wataru Shigeyama, Naoki Hosogi, Hideki Matsushima<sup>1</sup>JEOL Ltd., Kyoto, Japan**BP Seminar 2 (Carl Zeiss Co., Ltd.)**

Room B-1

12:35-13:35

**Investigate Molecular Dynamics in Live Cells and Organisms using Fluorescence Correlation-based Microscopy Methods**

Chair

Akira Sato (ZEISS Research Microscopy Solutions, Japan)

**BP2-1**

Xianke Shi

ZEISS Research Microscopy Solutions, APAC, Singapore

**Tuesday, June 25****BP Seminar 3 (Leica Microsystems K.K.)** Room B-212:35-13:35 **To The Future of Microscopy Imaging**

Chair Shintaro Tanaka (Leica Microsystems K.K.)

**BP3-1** Intracellular temperature mapping using high-speed fluorescence lifetime imaging microscopyKohki Okabe<sup>1</sup>, Suguru Osari<sup>2</sup><sup>1</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan,<sup>2</sup>Leica Microsystems K.K., Tokyo, Japan**BP Seminar 4 (Nakatani Foundation)** Room C-212:35-13:35 **Unveil the Spark: Explore the Decision Moment to become Biophysicists!**

Chairs Satoshi Takahashi (Tohoku University)

Seiji Kojima (Nagoya University)

Ikuko Fujiwara (Nagaoka University of Technology)

**BP4-1** Elizabeth Hinde<sup>1</sup>, Yoshie Harada<sup>2</sup>, Heeyoun Bunch<sup>3</sup><sup>1</sup>Sch. Phys., Univ. Melbourne, <sup>2</sup>Institute of Protein Res., Osaka Univ, <sup>3</sup>Kyungpook National Univ.**BP Seminar 5 (SIGMAKOKI CO., LTD.)** Room D12:35-13:35 **A New World from Single Cells to Cell Populations Revealed by the Ultra-wide-field Microscope "AMATERAS"**

Chair Nobutoyo Oguni (SIGMAKOKI CO., LTD.)

**BP5-1** Development of trans-scale scope "AMATERAS" and direct observation of millions of cellular dynamics

Taro Ichimura

Osaka University, Osaka, Japan

**BP5-2** Introducing a new product of wide-field microscope "CUS-WF" that can be installed in each laboratory

Yuichi Inoue

SIGMAKOKI CO., LTD., Tokyo, Japan

# Sponsored Seminar

## BP Seminar 6 (On-chip Biotechnologies Co., Ltd)

Room E

12:35-13:35 **BarBIQ: a novel method for single-cell-based quantitative analysis of bacterial microbiota using droplets**

Chair Kageyasu Takanashi (On-chip Biotechnologies Co., Ltd.)

**BP6-1 BarBIQ: accurate identification and quantification of bacterial cells in the microbiota using droplets and cellular barcoding**

Katsuyuki Shiroguchi

RIKEN Center for Biosystems Dynamics Research (BDR), Japan

## Sponsored Symposium 1: Physics and Mechanobiology in Cellular and Extracellular Systems

Room D

16:00-18:20 **Physics and Mechanobiology in Cellular and Extracellular Systems**

**Sponsor:** MEXT KAKENHI Grant-in-Aid for Transformative Research Area (A)  
"Material properties determine body shapes and their constructions"  
MEXT KAKENHI Grant-in-Aid for Transformative Research Area (A)  
"Integration of Extracellular Information by Multimodal ECM Activity"

Chairs Shinji Deguchi (Osaka University)

Yasuhiro Inoue (Kyoto University)

**SS-1-1 Molecular mechanisms regulating mechanotransduction at cell adhesions**

Cristina Bertocchi<sup>1,2</sup>

<sup>1</sup>Pontificia Universidad Católica de Chile, Chile, <sup>2</sup>Osaka University, Japan

**SS-1-2 Dissecting the Mechanical and Dynamic Behaviors of Cells in Silico**

Makito Miyazaki<sup>2</sup>, June Hyung Kim<sup>1</sup>, Taeyoon Kim<sup>1</sup>

<sup>1</sup>Weldon School of Biomedical Engineering, Purdue University, West Lafayette, USA,

<sup>2</sup>RIKEN Center for Biosystems Dynamics Research, Yokohama, Japan

**SS-1-3 Statistical mechanics approach to cell-substrate interactions**

Shinji Deguchi, Yuika Ueda

Osaka University

**SS-1-4 The Role of Environmental Asymmetry in Epithelial Tissue**

Yasuhiro Inoue, Kentaro Morikawa

Department of Micro Engineering, Graduate School of Engineering, Kyoto University, Kyoto, Japan

**Wednesday, June 26****Morning Seminar 2 (GeneFrontier) Room A**

8:00-8:50 Introduction of the reconstituted cell-free protein synthesis system, the PURE system, for synthetic biology research

Chair Takashi Kanamori (GeneFrontier Corporation)

**MS2-1 A reconstituted cell-free protein synthesis for synthetic biology research: gene regulation to artificial cell synthesis**

Tomoaki Matsuura

Earth-Life Science Institute, Tokyo Institute of Technology, Tokyo, Japan

**BP Seminar 7 (Refeyn) Room A**

12:35-13:35 Mass Photometry – Revolutionary Biophysical Characterization of Single Molecules

Chair Kohei Shiba (Refeyn Japan, K.K.)

**BP7-1** Tomás de Garay  
Refeyn Ltd.**BP Seminar 8 (HAMAMATSU PHOTONICS K.K.) Room B-1**

12:35-13:35 Nanoscale Quantum Biosensors: Imaging Techniques for Measurement

**BP8-1** Ryuji Igarashi<sup>1,2,3</sup>

<sup>1</sup>Institute for Quantum Life Science, National Institutes for Quantum Science and Technology, Chiba, Japan, <sup>2</sup>School of Life Science and Technology, Tokyo Institute of Technology, Tokyo, Japan, <sup>3</sup>Graduate School of Science and Engineering, Chiba University, Chiba, Japan

**BP Seminar 9 (Yokogawa Electric Corporation) Room D**

12:35-13:35 The Story behind the Invention of the Confocal Scanner CSU

Chairs Toshiaki Endou (Yokogawa Electric Corporation)

Yoshitaka Sekizawa (Yokogawa Electric Corporation)

**BP9-1** The story behind the invention of the confocal scanner CSU

Takeo Tanaami

Yokogawa Electric Corporation, Tokyo, Japan

# Sponsored Seminar

## BP Seminar 10 (Digital Bioassay Laboratory, The University of Tokyo and TOPPAN Holdings Inc.) Room E

12:35-13:35 **Digital Bioassay Laboratory in Univ. Tokyo**

Chair Yoichi Makino (Technical Research Institute, TOPPAN Holdings Inc.)

### **BP10-1** Digital bioassay for analyzing Alzheimer's amyloid $\beta$ -bound extracellular vesicles

Kohei Yuyama<sup>1</sup>, Hui Sun<sup>1</sup>, Yoichi Makino<sup>2</sup>

<sup>1</sup>Faculty of Advanced Life Science, Hokkaido University, Sapporo, Japan, <sup>2</sup>Technical Research Institute, TOPPAN Holdings Inc., Saitama, Japan

### **BP10-2** Applications of Digital Bioassay

Yoshihiro Minagawa<sup>1,2</sup>, Hiroshi Ueno<sup>1,2</sup>, Hiroyuki Noji<sup>1,2</sup>

<sup>1</sup>Department of Applied Chemistry, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, <sup>2</sup>Digital Bioanalysis Laboratory, The University of Tokyo, Tokyo, Japan

# Thursday, June 27

## Morning Seminar 3 (Avanti Polar Lipids)

Room A

8:00-8:50

### PROTEIN AGGREGATION AND DISEASES

Chair

Motomasa Tanaka (RIKEN Center for Brain Science)

#### MS3-1

Motomasa Tanaka<sup>1</sup>, Lukasz A. Joachimiak<sup>2</sup>, Eri Chatani<sup>3</sup>

<sup>1</sup>RIKEN Center for Brain Science, Wako, Japan, <sup>2</sup>University of Texas Southwestern Medical Center, Dallas, Texas, USA, <sup>3</sup>Graduate School of Science, Kobe University, Kobe, Japan

## BP Seminar 11 (NIKON SOLUTIONS CO.,LTD.)

Room A

12:35-13:35

### From VAAS to NSPARC: 15 Years of Super-Resolution Confocal Microscopy

Chair

Tatsuo Fukui (NIKON SOLUTIONS CO.,LTD.)

#### BP11-1

Yasushi Okada<sup>1,2,3</sup>

<sup>1</sup>RIKEN Center for Biosystems Dynamics Research (BDR), Osaka, Japan, <sup>2</sup>Department of Cell Biology, Graduate School of Medicine, the University of Tokyo, Tokyo, Japan, <sup>3</sup>Department of Physics, Universal Biology Institute (UBI) and International Research Center for Neurointelligence (WPI-IRCN), the University of Tokyo, Tokyo, Japan

## BP Seminar 12 (Refeyn)

Room B-1

12:35-13:35

### Mass Photometry – Revolutionary Biophysical Characterization of Single Molecules

Chair

Kohei Shiba (Refeyn Japan, K.K.)

#### BP12-1

Kohei Shiba  
Refeyn Japan, K.K.

## BP Seminar 13 (Evident Corporation)

Room D

12:35-13:35

### Reconstitution of actin cytoskeletal dynamics and functions

#### BP13-1

Makito Miyazaki<sup>1,2</sup>

<sup>1</sup>RIKEN Center for Biosystems Dynamics Research, Kanagawa, Japan, <sup>2</sup>Graduate School of Medicine, Science, and Technology, Shinshu University, Nagano, Japan

# Sponsored Seminar

## BP Seminar 14 (Twist Bioscience)

Room E

12:35-13:35 **WeMakeDNA - Approaches to Optogenetics Using Synthetic Genes**  
Chair Masanori Noguchi (Twist Bioscience)

### BP14-1 Structural and Functional Analysis of Light-Gated Ion Channels Assisted by Rapid DNA Synthesis Services

Hideaki Kato  
The University of Tokyo, Tokyo, Japan

## Sponsored Symposium 2: Exploring the Dynamics of Biomolecular Supra-Assemblies

Room A

16:00-18:20 **Exploring the Dynamics of Biomolecular Supra-Assemblies:**

**Sponsor:** JST PRESTO, Dynamic supra-assembly of biomolecular systems

Chairs Hideaki Nakamura (Kyoto University)  
Shunsuke Shimobayashi (Kyoto University)  
Eiji Yamamoto (Keio University)

### SS-2-1 Challenging the frontiers of single-molecule or super-resolution live-cell Imaging.

Yasushi Okada<sup>1,2</sup>  
<sup>1</sup>Dept Cell Biol, Grad Sch Med, Univ Tokyo, <sup>2</sup>RIKEN BDR

### SS-2-2 Liquid-liquid phase separation and synaptic plasticity

Yasunori Hayashi  
Kyoto University Graduate School of Medicine

### SS-2-3 Dynamics of phase separated protein condensate materials

Yongwon Jung  
Department of Chemistry, Korea Advanced Institute of Science and Technology, Daejeon, Korea

### SS-2-4 Mega-scale experimental analysis of protein folding stability in biology and design

Kotaro Tsuboyama<sup>1</sup>, Gabriel Rocklin<sup>2</sup>  
<sup>1</sup>IIS, UTokyo, <sup>2</sup>Feinberg Medical School, Northwestern University



## Thursday, June 27

---

**SS-2-5**      **Manipulating and elucidating nucleation principles of biomolecular condensates in living cells**

Shunsuke Shimobayashi  
Kyoto University, CiRA

**SS-2-6**      **Molecular dynamics of intrinsically disordered proteins within protein condensates**

Eiji Yamamoto  
Department of System Design Engineering, Keio University

# Sponsored Seminar

# Friday, June 28

Sponsored Seminar

June 28 [Fri]

**BP Seminar 15 (The Biophysical Society of Japan & Acaric.co.ltd.)****Room A**12:35-13:35 **Beyond Borders: Insights into International Employment Opportunities**

Chairs Takayuki Nishizaka (Committee for Gender Equality and Support for Young Researchers, The Biophysical Society of Japan)

Daisuke Nakane (Committee for Gender Equality and Support for Young Researchers, The Biophysical Society of Japan)

**BP15-1 Global Employment Trends and Application Tips**Toshiaki Kaminaka<sup>1</sup>, Junko Tamaki<sup>1</sup>, Daisuke Nakane<sup>2</sup>, Takayuki Nishizaka<sup>2</sup><sup>1</sup>Acaric co. ltd., Tokyo Japan, <sup>2</sup>Committee for Gender Equality and Support for Young Researchers, The Biophysical Society of Japan**BP Seminar 16 (Nagoya Institute of Technology & SHIMADZU CORPORATION)****Room B-2**12:35-13:35 **Introduction of Mass Spectrometry Imaging Technology**

Chair Kota Katayama (Graduate School of Engineering Nagoya Institute of Technology)

**BP16-1 Introduction of Mass Spectrometry Imaging Technology**

Eiichi Matsuo

Analytical &amp; Measuring Instruments Division Shimadzu Corporation, Japan

# Chairs and Speakers Index

---

# Chairs and Speakers Index

\* Chair person      Bold: Presenter

<b>A</b>			
		Akada, Momo	<b>26P-101</b>
		Akai, Hiromu	<b>HT-D-6</b>
Abbas, Ghaeath S.K.	S20-4	Akanuma, Satoshi	27P-021
Abdelkader, Elwy	27P-032	Akashi, Satoko	28P-181
Abe, Ayaho	27P-067	Akatsu, Munetaka	S11-3, 27P-092
Abe, Hiroshi	27P-251	Akhyar, Okviyoandra	<b>27P-172</b>
Abe, Kazuhiro	<b>S3-4</b>	Akita, Fusamichi	26P-007
Abe, Keietsu	25P-040	Akita, Ryo	26P-238, <b>27P-238</b>
Abe, Masayuki	26P-080, 28P-025	Akiyama, Koichiro	25P-188
Abe, Nanami	26P-163	Akiyama, Koyu	28P-237
Abe-Yoshizumi, Rei	26P-075, 26P-172, <b>27P-180</b>	Akiyama, Masakazu	HT-E-4
Abeje, Tefera Dessalegn	26P-018	Akiyama, Shu	25P-122
Abekawa, Takumi	<b>26P-216</b>	Akiyama, Shuji	*YF
Abkarian, Manouk	S30-1	Akiyama, Yutaka	26P-210
Abramsson, Mia Louis	<b>25P-071</b>	Alam, Farzana	S20-3
Abriata, Luciano	25P-028, 28P-055	Alam, Mohammad Shahidul	26P-250
Abshkaron, Romany	S25-3	Alavi, Zahra	26P-026
Aburaya, Shunsuke	25P-186, 25P-187	Aleksandrova, Veronika	<b>28P-207</b>
Adachi, Daisuke	<b>27P-019</b>	Alexander, Cameron	26P-090
Adachi, Koki	<b>27P-040</b>	Algiffari, Muhammad	<b>27P-189</b>
Adachi, Kyosuke	28P-216	Alhatmi, Elmukhtar	28P-126
Adachi, Naruhiko	S16-7, 25P-004, 26P-003	Allakhverdiev, Elvin Suleyman oglu	<b>25P-270</b>
Adachi, Taiji	YF-6, 25P-231, 26P-082	Allen Institute for Cell Science	S14-1
Adamiak, Martyna	28P-079	Allen, Joel	25P-266
Adams, Linda B.	27P-098	Aluko, Sankara	26P-217
Aevarsson, Arnthór	28P-020	Alves, Inês Paccetti	<b>26P-076</b>
Agarwal, Krishna	26P-254	Ambrosio, Andre	27P-007
Ahluwalia, Balpreet Singh	26P-254	Amino, Misako	26P-105
Ahsan, Ali	<b>27P-133</b>	Amondi, Mercy	<b>26P-217</b>
Aiba, Rakuri	26P-042, 28P-003	Amyot, Romain	<b>25P-212</b>
Aihara, Yoshiko	27P-205	Anand, Ganesh	S19-2, 25P-266
Aikawa, Chihiro	25P-062	Anand, Ruchi	<b>S3-3, ABA-4</b>
Ait-Mouhoub, Celia	S13-4	Anashkina, Anastasia A.	<b>28P-071</b>
Aizawa, Tomoyasu	26P-018, 27P-037	Anderluh, Gregor	S25-8
		Anderson, Daniel	25P-250

Ando, Hiromune	26P-138	Arata, Toshiaki	<b>27P-082</b> , 28P-090
Ando, Maiha	25P-136	Arbona, Jean-Michel	S29-2
Ando, Riku	25P-242	Ardaševa, Aleksandra	<b>25P-279</b>
Ando, Taro	26P-108	Arellano Ahumada, Stephany Natasha	
Ando, Tomohiro	<b>28P-021</b>		27P-053
Ando, Toshio	<b>PL-2</b> , 25P-055, 25P-078, 25P-115, 25P-246, 26P-066	Arellano Alcántara, Marco Alonso	27P-053
Andronico, Luca	<b>S9-2</b>	Arie, Misaki	27P-051
Andén, Olivia	25P-071	Ariefai, Maulana	27P-066
Anisimov, Mikhail	28P-207	Ariga, Takayuki	<b>S26-2</b>
Anraku, Yuki	28P-261	Arisawa, Akihiro	<b>27P-213</b>
Anton, Jana Susanne	<b>26P-019</b>	Ariyoshi, Tetsuro	25P-154
Antunes, André	27P-121	Arseniev, Alexander	27P-074
Anzai, Naohiko	25P-004	Artem, Lysenko	27P-238
Anzawa, Suai	28P-045	Asada, Hidetsugu	27P-077, 28P-029
Aoki, Kazuhiro	26P-131, 26P-246	Asahi, Toru	27P-063
Aoki, Mari	28P-027	Asaka, Rio	27P-049
Aoki, Shiho	<b>27P-063</b>	Asakura, Mami	<b>26P-150</b> , 26P-179
Aoki, Shion	26P-171	Asano, Risa	<b>25P-062</b>
Aoki, Wataru	25P-186, 25P-187	Asanuma, Shuna	25P-184
Aoyama, Hiroshi	28P-152	Asanuma, Yuika	28P-252
Aoyama, Miyuki	<b>28P-137</b>	Asor, Roi	26P-026
Aoyanagi, Hiroyuki	<b>26P-183</b>	Ataullakhanov, Fazoil I.	27P-226
Apostolopoulou, Virginia	<b>26P-231</b>	Au, Wing Ngor Shannon	<b>S30-2</b>
Appelmans, Olivia	25P-221	Aubert-Kato, Nathanael	28P-223
Arai, Munehito	YF-9, 28P-037, 28P-053	Auer, Florian	25P-002
Arai, Satoshi	<b>S6-2</b> , 26P-061, 27P-266	Aw, Rochelle	S20-3
Arai, Shigeki	27P-005	Ayan, Esra	27P-198
Arai, Shuhei	28P-151	Azai, Chihiro	25P-178, 27P-173
Arai, Shun	<b>27P-173</b>		
Arai, Tatsuo	25P-282		
Arai, Tatsuya	<b>25P-019</b> , 26P-045, 27P-110, 28P-061, 28P-063		
Araki, Kazutaka	<b>28P-095</b>		
Arantes, Guilherme M.	<b>25P-277</b>		
		<b>B</b>	
		Baba, Akiko	<b>25P-184</b> , 27P-184
		Baba, Kotaro	<b>25P-189</b>
		Baba, Rie	28P-251
		Baba, Shoji A.	27P-165

# Chairs and Speakers Index

Babu, Prem	25P-055	Barreto, Carlos	27P-201
Bacalum, Mihaela	<b>28P-258</b>	Baruah, Kakali	25P-015
Backman, Vadim	*S24, <b>S24-1</b>	Basak, Udoy S.	25P-129
Bada, Juan F.	26P-019	Bassereau, Patricia	*S29, <b>S29-4</b>
Badarla, Venkata Ramaiah	28P-244	Bastmeyer, Martin	28P-101
Badaya, Apoorva	26P-051	Baudrexel, Isabelle	S1-3
Badgujar, Pooja	28P-257	Bauermann, Jonathan	S26-6
Badgujar, Pooja Manik	<b>28P-243</b>	Bauernhofer, Lena	27P-075
Bae, Albert	28P-102	Bazzi, Hassan	27P-111
Baek, Minkyung	<b>S17-5</b>	Bean, Richard	28P-011
Bahrami, Amir H.	27P-144	Bechinger, Burkhard	<b>26P-143</b>
Bai, Jizhong	25P-281	Becker, Maria Inés	27P-007
Bai, Zhen	<b>27P-199</b>	Belic, Milivoj	25P-254
Baig, Fawaz	<b>27P-111</b>	Ben-Zvi, Anat	26P-068
Bailey, Constance B.	<b>S20-4</b>	Benitez, Milagros	27P-270
Baja, Oded	26P-021	Benito-Martínez, Andrea	27P-074
Bajorek, Monika	S13-4	Berezovsky, Igor N	<b>27P-224</b>
Baker, David	<b>PL-3</b>	Berhanu, Samuel	S20-2
Baker, Matthew	*S30, <b>S30-6</b>	Berman, Russ	25P-250
Balasundaram, Padmanabhan	<b>25P-033</b>	Bernardo, Cesar	S23-2
Ballouz, Sara	27P-098	Bernat, Nina	26P-130
Balmes, Aylin	<b>S18-5</b>	Berta, Denes	27P-219
Balog, Erika	<b>25P-213</b>	Bertocchi, Cristina	<b>SS-1-1</b>
Balzer, Bizan N.	25P-112, 25P-113	Bessho, Ken	<b>26P-145</b>
Ban, Shunnosuke	<b>26P-223</b>	Best, Robert	28P-196
Bando, Kazuki	27P-245	Betocchi, Lara	26P-130
Bandyopadhyay, Debashree	27P-191,	Betzig, Eric	25P-250
	<b>28P-179</b>	Beurskens, Frank J.	25P-029
Banerjee, Ramanuj	27P-025	Bhati, Gaurav Kumar	25P-117, <b>27P-112</b>
Bang, Jinho	27P-078	Bhattacharyya, Jhimli	25P-021
Bannai, Hiroko	27P-161, 27P-268, 28P-138,	Bhattacharyya, Swagata	27P-106
	28P-139	Bhattacharjee, Biplab	YF-7, 27P-218,
	26P-025		<b>28P-215</b> , 28P-230
Baptista, António M.	26P-076	Bhaumik, Prasenjit	S7-6
Baptista, Marta	<b>28P-034</b>	Bian, Yunqiang	S28-4

Bielecki, Johan	28P-011	Brzezinski, Peter	28P-024
Bielecki, Michael	25P-002	Bucki, Robert	S12-4
Biquet-Bisquert, Anaïs	S30-1	Bueno, Carlos	25P-217
Biriukov, Denys	<b>25P-201</b>	Buggert, Marcus	S9-2
Biswas, Arikta	S2-1	Bullen, Alexander Karl	<b>28P-242</b>
Bitbol, Anne-Florence	<b>S5-3</b>	Bunch, Heeyoun	*S13, <b>S13-5</b> , 27P-020,
Bk, Pradeep	25P-036		<b>BP4-1</b>
Blanchard, Scott C	<b>S15-4</b>	Bunsuwansakul, Chooseel	25P-252
Bo, Stefano	<b>S26-6</b>	Burke, John	27P-269
Bock, Lars	HT-C-1	Burton-Smith, Ray	25P-031
Bond, Peter	25P-224, 25P-266	Burton-Smith, Raymond	25P-073, 27P-071,
Bond, Peter J.	<b>S19-2</b>		27P-261
Bonomi, Massimiliano	<b>S10-5</b>	Bush, Rthan	25P-036
Bonvin, Alexandre	<b>S10-1</b>	Busse, Wayne	S23-2
Borowiak, Alexis S.	<b>26P-252</b>	Butler, Abbey M.	28P-044
Borsaikia, Simangka	26P-051	Byun, Jinyoung	<b>28P-185</b>
Bose, Kakoli	<b>S7-6</b>	Béjà, Oded	<b>S23-1</b> , 25P-172, 26P-170, 26P-172
Bose, Nilanjana	<b>28P-051</b>	Bürck, Jochen	28P-272
Bowman, Jessica C	S32-1		
Boyer, David Robert	<b>S25-3</b>	<b>C</b>	
Bozovic, Dolores	<b>S29-5</b>		
Bradley Silva, Maité	25P-250	Caaveiro, Jose	26P-057
Bragulat-Teixidor, Helena	S4-2	Camilo, Sofia	25P-277
Brandani, Giovanni	<b>HT-C-5</b> , 26P-095, 27P-223	Campbell, Robert	28P-056
Brandani, Giovanni B.	25P-093	Campbell, Robert E.	<b>HT-A-3</b> , 27P-240,
Brandenburg, Klaus	28P-127		27P-244
Brbic, Maria	<b>S14-6</b>	Campello, Maria	25P-283
Bressanelli, Stéphane	28P-212	Capera-Aragonès, Pau	S32-1
Bretan, Mason	25P-250	Caramello, Nicolas	26P-168
Brewster, Jodi	25P-027	Carannante, Valentina	S9-2
Bridge, Samara Elizabeth	<b>25P-142</b>	Cardozo, Romina	27P-270
Brodin, Petter	S9-2	Cargando, Abie	S6-1
Broser, Matthias	S23-2	Carpentier, Philippe	25P-007
Brown, Simon	25P-001, 25P-023, 28P-022	Carrio, Baptiste	S30-1
Brugués, Jan	S2-4	Carvalho, Filomena	26P-269

# Chairs and Speakers Index

Carvalho, Filomena A.	27P-137	Chavas, Leonard	25P-193, 27P-054
Carver, John A.	26P-039, 27P-041	Chavas, Leonard M.G.	<b>27P-260</b>
Casini, Angela	27P-138	Chawla, Himanshi	25P-266
Castanho, Miguel A. R. B.	<b>27P-263</b>	Chazan, Ariel	25P-172, 26P-172
Castro-Fernandez, Victor	27P-007	Che, Yong-Suk	28P-122
Castro-Hartmann, Pablo	28P-155	Chen, Chen	<b>25P-183, 26P-255</b>
Cattaneo, Antonino	27P-074	Chen, Chen-Hui	HT-E-5
Celedón Ornelas, Luis	<b>27P-053</b>	Chen, Daniel Tzu Li	28P-121
Chae, Pilseok	28P-067	Chen, Howard C.H.	S8-5
Chafai, Djamel Eddine	<b>27P-052</b> , 27P-259	Chen, Jianhan	*S10
Chai, Hong Xuan	<b>25P-089</b>	Chen, Jiun-Hong	28P-257
Chait, Brian	25P-081	Chen, Kuan-Chou	S26-4
Chakrabarti, Jaydeb	27P-149	Chen, Liuan	28P-261
Champion, James	27P-220	Chen, Ming Chi	<b>28P-121</b>
Chan, Chii Jou	<b>S2-1</b> , 27P-099	Chen, Ming-Chi	S4-4
Chan, Justin	<b>26P-095</b> , 26P-207	Chen, Pei-Lung	28P-198
Chan, Ka	S25-3	Chen, Pei-Tzu	<b>27P-035</b>
Chan, Kok Sim	26P-042	Chen, Siyi	26P-116
Chan, Yen-Hui	28P-198	Chen, Xiao-Hua	28P-046
Chanachanvong, Thanchanok	<b>25P-204</b>	Chen, Yun-Ru (Ruby)	<b>S25-6</b>
Chander, Shikha	<b>25P-274</b>	Cheng, Chao-Han	<b>25P-275</b>
Chandru, Kuhan	25P-182	Cheng, Cheng	27P-170
Chang, Chia-en	25P-024	Cheng, Chia-Liang	28P-243, <b>28P-257</b>
Chang, Chih-Chun	25P-082	Cheng, Tat	25P-002
Chang, Chun-Yen	28P-143	Cheng, Yi-Yun	S26-4
Chang, Hao-Yen	25P-082	Cheng, Yuanlei	S26-1
Chang, Jeong Ho	S13-5	Chenyang, Gu	<b>27P-223</b>
Chang, Yuan-Pin	<b>28P-229</b>	Cheong, Chon-In	26P-264
Chang-Chein, Chi-Hong	S26-4	Chew, Pin Yu	<b>25P-203</b>
Changeux, Jean-Pierre	25P-254	Chi, Dam Hieu	28P-083
Chatani, Eri	YF-5, *S25, <b>S25-4</b> , 26P-039, 26P-041, 27P-006, 27P-041, MS3-1	Chi, Peter	25P-082
Chaudhuri, Abhishek	27P-148	Chiba, Daichi	25P-241
Chavali, Chandra H.	25P-147	Chiba, Genta	<b>27P-231</b>
Chavarria, Luisina	27P-270	Chiba, Kaori	<b>28P-057</b>
		Chiba, Naoya	26P-121



Chiba, Toshikaze	28P-270	Cong, Anh	S13-5
Chikenji, George	25P-193, 27P-054	Cooney, Aileen	26P-186
Chikhouné, Anis	<b>27P-259</b>	Coppola, Maria Antonietta	25P-272
Cho, HyeokJin	28P-094	Corbo, Joeseeph	S24-3
Cho, Kengo	<b>26P-096</b>	Cordero, Mireia	S26-5
Cho, Won-Ki	S8-4, <b>S13-6</b> , 26P-268	Corey, Robin A	25P-071
Choi, SeaHae	27P-008	Cornell, Bruce	25P-142
Chong, Song-Ho	<b>HT-C-4</b> , 28P-204	Cornish, Katy	28P-020
Choudhury, Devapriya	26P-198	Correa, Wilmar	28P-127
Chrisnanto, Jeremia	27P-037	Corry, Ben	25P-074, 25P-218, 27P-003, 27P-220
Chrisnanto, Jeremia Oktavian	<b>26P-018</b>	Costa, Mario	27P-074
Chu, Pan	28P-173	Costner, John T	S32-1
Chu, Xiakun	<b>25P-202</b> , 27P-065	Coudreuse, Damien	26P-246
Chua, Gabriella N.L.	<b>25P-081</b>	Coutinho, Ana	25P-079
Chuang, Wei-Jen	27P-062	Covino, Roberto	*S9, <b>S9-7</b> , 25P-160, *MS1, <b>MS1-1</b>
Chujie, Liu	<b>28P-023</b>		
Chujo, Takeshi	25P-187		
Chuma, Shunsuke	26P-243, <b>27P-243</b> , 27P-265	Cranfield, Charles	25P-142
		Cranfield, Charles G.	25P-147
Chung, Gehoon	<b>27P-215</b>	Cree, Ben	<b>27P-200</b>
Chung, Shin Hye	27P-215	Crispin, Max	25P-266
Chytrosz-Wrobel, Paulina	28P-211	Crossman, David	<b>25P-281</b>
Chávez Ramírez, Belén	27P-053	Crowley, Peter	25P-261
Ciftci, Halilibrahim	27P-198	Crowley, Peter B.	26P-005
Cissé, Ibrahim	<b>S11-4</b>	Cruz, Carla	25P-283
Clarke, Ronald J	<b>25P-145</b>	Cui, Wenwen	25P-003
Clayton, Andrew	25P-254	Cuong, Nguyen Viet	28P-083
Clement, Jean-Emmanuel	<b>S14-3</b> , 27P-247, 27P-248	Cutler, Max	<b>26P-083</b>
		Cwiklik, Lukasz	28P-211
Clementi, Cecilia	*S21	Cyranka, Katarzyna	25P-271
Clément, Jean-Emmanuel	27P-255	Czigleccki, Janka	25P-213
Cohen, Barak Alon	<b>S24-3</b>	Čujová, Sabína	25P-144
Cohen, Eli	<b>S22-4</b>		
Colleparado-Guevara, Rosana	<b>S21-2</b> , S24-5, 25P-203, 26P-092		

# Chairs and Speakers Index

## D

D'Angelo, Giovanni	25P-028	Descamps, Delphyne	S13-4
D'Asaro, Dario	S29-2	Destan, Ebru	27P-198
da Silva, Inês V.	26P-076, 27P-137, <b>27P-138</b>	Devi, CH.Shanthi	26P-271
Dadi, Pavani	28P-032	Devi, Himanshi	26P-051
Dahan, Maxime	S29-4	Di Carlo, Dino	25P-239
Dai, Kun	25P-113	Di Meo, Thibault	26P-062
Dai, Liang	26P-081	Di Meo, Thibault Philippe Laurent	<b>28P-048</b>
Dal Peraro, Matteo	25P-028, 26P-019, <b>26P-115</b> , 28P-055	Di Talia, Stefano	S2-4
Dalton, Benjamin	S2-4	Digman, Michelle	<b>S1-5</b>
Damm, Alicia	S29-4	Ding, Mei	<b>28P-124</b>
Dao, E. Han	27P-198	Ding, Shihang	<b>26P-218</b>
Darzacq, Xavier	25P-250	Ding, Siyang	<b>26P-153</b>
Das, Akashaditya	S20-3	Dinglasan, Jaime Lorenzo N.	S20-4
Davis, Brynmor	25P-250	Dohmae, Naoshi	27P-175
Davis, Steven	HT-E-4	Doi, Nobuhide	25P-098, 25P-235
De Borggraeve, Wim	25P-221	Dokainish, Hisham	S10-3
De Feyter, Steven	25P-061	Dokainish, Hisham M	YF-10, 26P-263
de Garay, Tomás	<b>BP7-1</b>	Dokainish, Hisham M.	<b>S19-4</b> , 26P-055
de Resende Lara, Pedro Tulio	25P-213	Doktycz, Mitchell J.	S20-4
De Silva, Nimali	28P-034	Dominguez, Lucia	27P-270
De, Soumya Kanti	S32-3	Dong, Jiawei	S13-4
Deguchi, Shinji	25P-279, 26P-218, *SS-1, <b>SS-1-3</b>	Dong, Qi	<b>27P-178</b>
Deguchi, Teppei	<b>S17-6</b>	Dong, Xicun	<b>28P-164</b>
Delemotte, Lucie	25P-200, 26P-201	Doostmohammadi, Amin	S26-5, <b>S29-1</b> , 25P-279
DeMirci, Hasan	27P-198	Dorohova, Anna	28P-192
Demizu, Yosuke	25P-008	Dostal, Jakub	S23-2
Deng, Weixia	25P-036	Dr. Debashree Bandyopadhyay	26P-020
Deng, Yunxin	<b>25P-114</b>	Drew, David	25P-071
Deplazes, Evelyne	25P-147	Drew, David M.	S33-4
Derecik, Kayhan	S22-3	Driouchi, Amine	<b>25P-250</b>
Derganc, Jure	26P-130	Drobotenko, Mikhail	28P-192
		Dubey, Vishesh	26P-254
		Dudas, Balint	25P-213, <b>27P-219</b>
		Dudko, Olga K.	<b>S24-4</b>

Dunbabin, Phoebe	S6-1	Enomoto, Hideki	26P-259
Dunn, Alexander	<b>S6-3</b>	Ergul, Ali	27P-198
Dutta, Shubhankar	S7-6	Ertem, Fatma Betul	27P-198
Dutta, Shuvadip	<b>26P-093</b>	Eskelin, Katri	S19-6
Dzhimak, Stepan	<b>28P-192</b>	Esmedlyaeva, Diljara	26P-234
Díaz Herreros, Alma Nelly	27P-053	Espadas, Javier	28P-068
<b>E</b>		Essen, Lars-Oliver	26P-168
<hr/>		Etchuya, Kenji	27P-100, 28P-178
Ebata, Hiroyuki	28P-107	Eto, Sumie	S20-2
Echigoya, Syun	<b>26P-165</b>	Ezat, Ahmed Adel	<b>25P-263</b>
Eda, Kazuo	25P-009	<b>F</b>	
Eggenreich, Loretta	27P-075	<hr/>	
Ehara, Haruhiko	S13-5, 28P-027	Faber, Justin	S29-5
Ei, Shin-Ichiro	HT-E-4	Fairweather, Stephen	25P-074
Eisenberg, David	S25-3	Fajdiga, Lija	<b>26P-130</b>
Ejiri, Tomo	<b>26P-022</b>	Fan, Hao	25P-205
Ekanayake, Hansani	<b>27P-028</b>	Fan, Hsiufang	<b>28P-097</b>
Eki, Toshihiko	28P-152	Fan, Minzhi	28P-074
Ekimoto, Ryo	28P-002	Farr, Stephen	S21-2, 26P-092
Ekimoto, Toru	27P-212, <b>28P-199</b>	Fedorov, Vladimir A.	27P-226
Eklund, Alexandra	S1-3	Fefilova, Anna	26P-065
Eladl, Omar	28P-072	Feig, Michael	<b>S10-4</b>
Elani, Yuval	26P-186	Feng, Hao	<b>27P-239</b>
Eleouet, Jean-Francois	S13-4	Ferdous, Zannatul	<b>27P-255</b>
Ellena, Mathias	27P-007	Ferme, Lucrezia	S2-6
Emrich, Scott J.	S20-4	Fernandes, Thales	S30-1
Endo, Masahru	25P-125	Ferreira, Gonzalo R.	<b>27P-270</b>
Endo, Masayuki	<b>HT-D-1</b>	Ferreiro, Diego U.	<b>S21-3</b> , 25P-217
Endo, Mizuki	27P-178	Fioulaine, Sonia	28P-212
Endo, Toshiya	27P-044	Figueroa Mendoza, José Silvestre	27P-053
Endou, Toshiaki	*BP9	Fink, Ryan	27P-240
Engilberge, Sylvain	26P-168	Fischer, Xenia	28P-039
Engl, Wilfried	26P-116	Fisher, Paul	26P-153
Enoki, Sawako	25P-222	Fitschen, Lucy Johanna	<b>25P-027</b>

# Chairs and Speakers Index

Flechsig, Holger	25P-212, 27P-015	Fujishima, Kento	<b>28P-178</b>
Flood, Ronan J.	26P-005	Fujishima, Kosuke	27P-184
Foley, Alejandro	S25-3	Fujishiro, Shin	<b>S29-3</b> , 27P-164
Fong, Peying	25P-272	Fujita, Junso	28P-092
Fonin, Aleksander	26P-065	Fujita, Katsumasa	<b>S1-1</b> , 26P-100, 27P-245, 27P-247, 27P-248
Fonin, Alexander	26P-098, <b>28P-131</b>	Fujita, Keisuke	25P-101, <b>25P-138</b>
Forrest, William	25P-250	Fujita, Nozomi	<b>28P-208</b>
Fournier, Jean-Baptiste	26P-236	Fujita, Shoko	26P-056, <b>27P-254</b>
Franco, María	27P-074	Fujita, Suguru	<b>25P-018</b>
Franz, Clemens M.	25P-245, <b>28P-101</b>	Fujita, Yui	26P-012
Freitag-Pohl, Stefanie	28P-020, <b>28P-044</b>	Fujita, Yuki	28P-158
French, Leon	27P-098	Fujita, Yuya	28P-152
Frenkel-Pinter, Moran	<b>S32-1</b>	Fujitsuka, Kenji	<b>26P-039</b> , <b>27P-041</b>
Friedman, Ryan	S24-3	Fujiwara, Hisanori	28P-107
Frischauf, Nikolaus	25P-029	Fujiwara, Ikuko	*KL-4, YF-4, *S12, <b>S12-1</b> , 25P-131, 27P-131, 27P-134, *BP4
Frolov, Vadim	28P-068	Fujiwara, Kazuo	28P-007, 28P-036, 28P-040
Fréchin, Léo	28P-034	Fujiwara, Kei	25P-098, 25P-235
Fu, Xiongfei	<b>28P-173</b>	Fujiwara, Natsumi	<b>25P-267</b>
Fuchigami, Sotaro	<b>28P-181</b>	Fujiwara, Satoru	<b>28P-090</b>
Fuji, Yunosuke	<b>27P-113</b>	Fujiwara, Takahiro K.	25P-146, 26P-253
Fujie, Takuya	26P-210	Fujiwara, Toshimichi	27P-082, 28P-045
Fujii, Kentaro	25P-244	Fujiwara, Yuichiro	25P-151
Fujii, Masako	<b>27P-142</b>	Fujiyabu, Chihiro	<b>25P-169</b>
Fujii, Ritsuko	27P-172, <b>28P-154</b> , 28P-155	Fukasawa, Atsuhito	26P-054
Fujii, Shinya	25P-008	Fukase, Koichi	28P-060
Fujii, Yasuhiro	28P-271	Fukatsu, Takema	27P-183
Fujii, Yuki	28P-259	Fukazawa, Shogo	26P-038
Fujimaki, Shun	<b>26P-192</b>	Fukuda, Akihiro	<b>26P-088</b>
Fujimichi, Yuki	25P-181	Fukuda, Akiya	<b>26P-207</b>
Fujimori, Toshihiko	26P-225	Fukuda, Hiroto	25P-076
Fujimoto, Ai	<b>27P-083</b>	Fukuda, Koki	27P-245
Fujimoto, Satoshi	26P-259	Fukuda, Norio	YF-8, 25P-100
Fujino, Toki	27P-048	Fukuda, Shingo	25P-055, <b>25P-115</b>
Fujioka, Yoshihiko	28P-263		
Fujisawa, Tomotsumi	28P-152		

Fukuda, Shinji	28P-245	Furuta, Akane	26P-105
Fukuhara, Hideo	28P-261	Furuta, Ken'ya	<b>S20-5</b> , S26-3, 26P-105
Fukuhara, Shigetomo	26P-123	Furuta, Tadaomi	26P-046, 26P-078, <b>27P-061</b>
Fukui, Tatsuo	*BP11	Furutani, Yuji	25P-076, 26P-021, 26P-049, 26P-070, 26P-074, 26P-075, 26P-169
Fukuma, T.	26P-252	Furuya, Hidetaka	28P-090
Fukuma, Takeshi	<b>HT-B-1</b> , HT-B-2, 25P-240, 25P-245, 26P-244, 26P-250, 27P-095, 27P-269, 28P-174		
Fukumoto, Akihisa	25P-043	<b>G</b>	
Fukunaga, Hiroki	<b>25P-101</b>	Gakenou, Oluwaseun F.	<b>S33-4</b>
Fukunaga, Koichi	28P-251	Galleto, Roberto	26P-113
Fukuoka, Hajime	<b>28P-122</b>	Galloux, Marie	S13-4
Fukushima, Akihiro	26P-178	Galpern, Ezequiel	S21-3
Fukushima, Aoi	27P-192	Galpern, Ezequiel Alejandro	<b>25P-217</b>
Fukushima, Minoru	<b>27P-122</b>	Gamiz-Hernandez, Ana Patricia	<b>28P-024</b>
Fukuta, Masakazu	27P-023	Ganley, Ian	26P-153
Fukute, Jumpei	YF-6, 26P-082	Ganser, Christian	<b>28P-246</b>
Fumi, Hirai	26P-018	García-Álvarez, Begoña	25P-079
Funahashi, Toshiya	28P-021	Garg, Surbhi	25P-117, 27P-112
Funamoto, Kenichi	27P-156	Gasparikova, Dorata	28P-044
Funatsu, Takashi	25P-083, 28P-250, 28P-268	Gause, Maria	S24-3
Funk, Sydney	S17-4	Gavazzo, Paola	25P-272
Furlong, Emily	<b>25P-001</b>	Gavrilov, Pavel	26P-234
Furubayashi, Taro	<b>26P-062</b>	Gavrilova, Anastasiia	<b>26P-065</b>
Furuichi, Ryohei	25P-085	Ge, Peng	S25-3
Furuita, Kyoko	28P-045	Gegen, Tuya	26P-032, 26P-033
Furukawa, Ryutaro	27P-021	Geng, Jia	26P-111, 26P-255
Furukawa, Sachika	<b>25P-096</b>	Gerle, Christoph	27P-067, <b>28P-067</b>
Furukohri, Asako	25P-082	Gerwert, Klaus	<b>S18-1</b>
Furumoto, Shozo	26P-009	Gevorgyan, Heghine	25P-047
Furuno, Tadahide	25P-135, 28P-245	Ghilarov, Dmitry	28P-079
Furusawa, Chikara	*S5, S5-5, 25P-185, 26P-182, 26P-223, 26P-230, 26P-232, 27P-217, 28P-165	Ghodeswar, Sharayu Umakant	<b>27P-191</b>
Furusawa, Hideki	<b>27P-030</b>	Gholami, Azam	<b>28P-102</b>
		Ghosh, Priyam	<b>27P-241</b>
		Ghosh, Swagatha	27P-260

# Chairs and Speakers Index

Giannoulatou, Eleni	S30-6	Gradinaru, Claudiu	<b>28P-066</b>
Gidlund, Vincent	<b>25P-249</b>	Granas, David	S24-3
Gil, Mariana	S2-6	Greene, Eric	<b>S27-2</b>
Gilchrist, Michael A.	S20-4	Greene, Eric C.	*S27
Gillingwater, Thomas	S25-8	Gregory, Kasimir	25P-074
Gillis, Jesse	27P-098	Grey, Gus	25P-281
Gingeleit, Lukas	25P-002	Greyling, Jan	S33-4
Ginn, Helen	25P-219, 26P-231	Grubmuller, Helmut	<b>HT-C-1</b>
Ginter, Taren Elizabeth Buddle	<b>27P-184</b>	Gu, Hao	27P-037
Gisch, Nicolas	28P-127	Guan, Xingyue	<b>25P-020</b>
Glueck, David	27P-075	Gudimchuk, Nikita	<b>27P-226</b> , 28P-207
Go, Yeon Ju	S21-4	Gueroui, Zoher	<b>S8-2</b>
Goda, Makoto	26P-133	Guixé, Victoria	27P-007
Goessweiner-Mohr, Nikolaus	26P-190,	Guo, An-Di	28P-046
	<b>28P-014</b> , 28P-039, 28P-130	Guo, George	25P-281
Golda-Cepa, Monika	28P-211	Guo, Haozhe	<b>28P-205</b>
Gomibuchi, Yuki	<b>28P-115</b>	Guo, Hongxia	<b>28P-203</b>
Goncharuk, Sergey	27P-074	Guo, Lihao	YF-7, 28P-230
Gong, Jian Ping	27P-255	Guo, Zhongliang	27P-229, <b>28P-033</b>
Gong, Jing	25P-087	Gusain, Pooja	26P-164
Gong, Yiming	<b>28P-223</b>	Guthertz, Nicolas	28P-035
Gono, Asahi	<b>25P-148</b>	Gutsmann, Thomas	28P-042
Gopalasingam, Chai	26P-028, 27P-067,	Guven, Omur	27P-198
	28P-067	Gössweiner-Mohr, Nikolaus	28P-017
Gope, Amalesh	25P-256		
Goraku, Kei	<b>25P-085</b>	<b>H</b>	
Goshima, Gohta	26P-133		
Goto, Kaede	<b>26P-009</b>	Ha, Junsu	28P-213
Goto, Mie	28P-027	Haacke, Stefan	28P-147
Goto, Shinya	<b>25P-264</b>	Haga, Kei	27P-261
Goto, Yuhei	26P-246	Hagimoto, Sari	<b>27P-017</b> , 28P-186
Goto, Yuji	26P-064	Hagino, Tatsuya	27P-001
Goto, Yuna	<b>27P-080</b>	Hagiri, Yuki	<b>26P-146</b>
Gotoh, Hiroki	HT-E-3	Hagiwara, Soya	<b>26P-163</b>
Gouveia e Melo, Ryan	26P-269	Hagleitner-Ertugrul, Nora	28P-014

Hagleitner-Ertuğrul, Nora	26P-190	Harada, Yoshie	26P-243, 26P-256, 27P-243,
Haj Hussein, Roni	S25-3		27P-251, 27P-265, <b>BP4-1</b>
Hajduk, Joanna	<b>25P-118</b>	Harada, Yoshinori	26P-100, 27P-247, 27P-248
Hall, Malgorzata	26P-175, 26P-176	Harada, Yosuke	<b>27P-101</b>
Hamachi, Itaru	25P-191	Haraguchi, Takeshi	26P-103, 27P-030,
Hamada, Chihaya	28P-145		27P-031, 27P-033
Hamada, Masako	28P-152	Haraguchi, Tokuko	*S4, <b>S4-5</b>
Hamada, Rio	27P-011	Harai, Kazuhi	26P-228
Hamada, Shogo	27P-089	Harashima, Takanori	S16-6, <b>27P-084</b>
Hamada, Tsutomu	<b>28P-128</b>	Harata, Masahiko	26P-248
Hamada, Yuta	<b>27P-249</b>	Hario, Saaya	<b>27P-244</b>
Hamaguchi, Hiroki	27P-258	Hartmann, Lissy M.	<b>25P-147</b>
Hamaguchi, Norie	S16-7, <b>25P-004</b>	Hasan, Moynul	<b>25P-149</b>
Hamaguchi, Tasuku	28P-092	Hasanah, Citra	<b>27P-204</b>
Hamajima, Ryusei	28P-263	Hasegawa, Ryoya	<b>25P-087</b>
Hamanaka, Yuya	25P-191	Hasegawa, Sumitaka	27P-181
Hamanishi, Kohei	27P-176	Hashidate, Yuki	<b>26P-219</b>
Hamaoka, Kazuko	<b>25P-276</b>	Hashiguchi, Takao	27P-264, 28P-261
Hamasaki, Maho	27P-245	Hashimoto, Hitoshi	27P-252
Hamida, Reham Samir	<b>26P-256</b>	Hashimoto, Manami	<b>27P-171</b>
Hammerl, Jonas	S22-1	Hashimoto, Sae	27P-126
Han, Sungho Bosco	<b>25P-205</b>	Hashimoto, Satoshi	<b>25P-051</b>
Han, Yu	S22-1	Hashimoto, Wakana	26P-146
Han, Zhongjie	<b>27P-222</b>	Hashimoto, Yu	<b>26P-108</b>
Hanayama, Rikinari	25P-240	Hatakeyama, Tetsuhiro	27P-230
Hanazono, Yuya	25P-008	Hatakeyama, Tetsuhiro S.	<b>ABA-8, 25P-280</b>
Hando, Atsumi	26P-060, 27P-064, 27P-066	Hatori, Kuniyuki	26P-132
Hanks, Ben	27P-003	Hatta, Masayuki	27P-165
Hara, Akiho	27P-076	Hatton, Caitlin	S7-4, 27P-047
Hara, Yuji	27P-132	Hatton, Caitlin Emma	<b>26P-023</b>
Harada, Jiro	27P-173	Hattori, Akito	27P-161, 28P-138, 28P-139
Harada, Kosei	26P-248, <b>26P-249</b>	Hattori, Kazuki	S31-5
Harada, Ryuhei	25P-120	Hattori, Mitsuru	25P-238, 25P-259, 26P-046,
Harada, Ryuichi	26P-009		<b>28P-253</b>
Harada, Shunto	<b>26P-181</b>	Hattori, Motoyuki	25P-003, 25P-006, 25P-011,

# Chairs and Speakers Index

	25P-012, 25P-014, <b>26P-010</b>	Heckert, Alec	25P-250
Hattori, Shunji	28P-025	Heddle, Jonathan G	28P-079
Hatzakis, Nikos	S29-4	Hegemann, Peter	S23-2
Hauer, Lukas	<b>27P-144</b>	Heintzmann, Rainer	27P-245
Hauf, Samuel	<b>28P-075</b>	Helbig, Karla	26P-153
Hayakawa, Eri Saki H.	<b>28P-126</b>	Hengphasatporn, Kowit	<b>25P-120</b> , 27P-073, 27P-207
Hayakawa, Masayuki	<b>YF-7</b> , 28P-215, <b>28P-230</b>	Henkys, Ivo	25P-184
Hayamizu, Yuhei	26P-204, 27P-095	Henmi, Masami	28P-027
Hayashi, Daiki	27P-205	Herasymenko, Krystyna	28P-147
Hayashi, Fumio	<b>27P-153</b>	Hernandez-Caceres, Jose Luis	28P-192
Hayashi, Hideya	28P-093	Heyes, Derren	26P-016
Hayashi, Ikuko	<b>HT-B-6</b>	Hibino, Emi	<b>26P-040</b>
Hayashi, Katsuhiko	26P-259	Hibino, Kayo	*S11, <b>S11-1</b>
Hayashi, Kiichi	28P-003	Hibino, Masahiro	<b>28P-156</b>
Hayashi, Kohei	27P-236	Hideki, Kandori	25P-170
Hayashi, Kumiko	*BPS, *S26, <b>25P-107</b>	Hidetoshi, Kono	26P-095
Hayashi, Masahito	25P-167, 25P-188, 26P-101, 26P-148, 27P-162, 27P-182, 28P-132, <b>28P-172</b> , 28P-234	Higashiyama, Shinsuke	<b>26P-006</b>
Hayashi, Shigehiko	26P-022, 27P-170, 28P-021, 28P-073	Higo, Junichi	27P-196, 28P-262
Hayashi, Takashi	HT-E-4	Higuchi, Hideo	25P-106
Hayashi, Tomohiko	27P-097	Hijikata, Atsushi	26P-229
Hayashi, Tomohiro	25P-143	Hijikata, Reiji	26P-040
Hayashi, Yasunori	<b>SS-2-2</b>	Hikiri, Simon	25P-097, <b>26P-097</b> , 27P-196, 27P-208, 28P-262
Hayashi, Yugo	28P-003	Himaja, Devarakonda	<b>26P-020</b>
Hayashida, Yukihiisa	<b>26P-135</b> , 27P-022, 28P-115	Himeoka, Yusuke	<b>S5-5</b> , 26P-223, 26P-230, 26P-232
Hayasi, Masahito	27P-179	Hinde, Elizabeth	*S1, <b>S1-4</b> , <b>ABA-1</b> , <b>BP4-1</b>
Hayes, Brandon	27P-198	Hirai, Fumi	27P-037
Hazawa, Masaharu	25P-246	Hirai, Mitsuhiko	27P-005
Hazemann, Isabelle	28P-034	Hirai, Yuya	25P-264
He, Jianhua	26P-030	Hiraishi, Masatoshi	27P-050
He, Jinpeng	<b>28P-163</b>	Hiraka, Kentaro	<b>27P-261</b>
He, Sitong	25P-074, 25P-218	Hirano, Atsushi	25P-038
		Hirano, Hisato	26P-006



Hirano, Kotaro	27P-132	Honda, Hajime	27P-131
Hirano, Minako	26P-150, <b>26P-179</b> , 27P-175	Hondele, Maria	<b>S8-1</b>
Hirano, Rina	S11-3	Hong, Yong-Zhan	25P-275
Hirao, Takumi	28P-187, <b>28P-188</b>	Hong, Yuning	<b>25P-068</b> , 26P-153
Hirashima, Naohide	25P-135	Honjo, Junko	27P-165
Hirata, Eishu	25P-240	Hori, Naoto	26P-083, 26P-084, 26P-090, <b>27P-091</b>
Hirata, Fumio	27P-034	Hori, Yuta	<b>27P-207</b>
Hiratani, Ichiro	28P-174	Horie, Masayuki	25P-264
Hirayama, Ryoichi	26P-180, <b>27P-181</b>	Horiguchi, Shuhei	<b>S14-4</b> , 25P-233
Hiroaki, Hidekazu	26P-040, <b>28P-263</b>	Horii, Mao	25P-133
Hirokawa, Takatsugu	28P-187, 28P-188, 28P-189	Horii, Taiga	<b>27P-022</b> , 27P-051
Hiroki, Akihiro	27P-258	Horiike, Yoshiaki	<b>27P-164</b>
Hirono, Masafumi	25P-133	Horinaka, Kio	<b>27P-001</b>
Hirosawa, Koichiro M	<b>26P-138</b>	Horitani, Masaki	27P-023, 27P-028, 27P-049, <b>28P-047</b>
Hirosawa, Koichiro M.	25P-137, 25P-146, 26P-242	Horner, Andreas	26P-043, 26P-044, <b>28P-039</b>
Hirose, Tetsuro	25P-084	Horonushi, Dan	<b>25P-136</b>
Hirose, Yuu	<b>28P-152</b>	Hosain, Mohammad Mubarak	<b>26P-244</b>
Hiroshi, Takahashi	<b>27P-147</b>	Hoshina, Hiroyuki	27P-258
Hiroshima, Michio	<b>27P-115</b> , 27P-140, 28P-120	Hoshino, Masaru	28P-057
Hiroyuki, Mino	25P-175	Hoshino, Tatsuya	27P-147
Hiruta, Yuki	28P-253	Hosogi, Naoki	<b>BP1-1</b> , BP1-2
Hisatomi, Osamu	26P-080, 28P-159, <b>28P-162</b>	Hosoi, Haruko	<b>25P-035</b> , 27P-029
Hishida, Mafumi	25P-096, 26P-096, <b>28P-082</b>	Hosokawa, Chie	*S18, <b>S18-4</b> , 27P-150
Ho, WenJin	<b>26P-100</b>	Hosokawa, Yuhei	<b>26P-168</b>
Hof, Martin	25P-144, 26P-139	Hososhima, Shoko	25P-022, 25P-025, 26P-021, 26P-177, 28P-149, <b>28P-161</b>
Hojo, Hironobu	27P-082	Hou, Yuge	<b>26P-141</b>
Holt, Stephen	25P-142	Howard, Rebecca J	25P-071
Holt, Stephen A.	25P-147	Hsieh, Yun-Jung	<b>25P-024</b>
Holvec, Samuel	28P-034	Hsiung, Chia-Heng	28P-136
Homma, Chishu	26P-204	Hsiung, Jessica	25P-250
Homma, Michio	<b>25P-031</b> , 27P-127	Hsu, Chuan-Jen	28P-198
Homma, Sakura	<b>28P-214</b>	Hsu, Chun-Hua	<b>28P-031</b>
Honda, Gen	25P-278, <b>26P-137</b>		

# Chairs and Speakers Index

Hsu, Shang-Te Danny	<b>S19-1, *ABA, ABA-7</b>	Ichiki, Takanori	26P-063
Hu, Hao	28P-046	Ichimura, Taro	<b>27P-252, BP5-1</b>
Hu, Wei	28P-046	Ichinose, Sotaro	<b>27P-136</b>
Hu, Xiaojian	26P-030	Ida, Tetsuya	28P-236
Hua, Junrui	28P-163	Ide, Satoru	<b>S13-7, S24-2</b>
Huang, Bang-Chieh	S26-4	Ide, Tomohiro	<b>25P-069, 26P-069</b>
Huang, Chih-Hao	YF-5, 26P-041	Ide, Toru	26P-150, 26P-179
Huang, Pei-Yang	28P-257	Ideguchi, Takuro	28P-244
Hubatsch, Lars	S26-6	Igaev, Maxim	HT-C-1
Huber, Thomas	27P-032	Igarashi, Emiko	28P-261
Huertas, Jan	S21-2, <b>S24-5, 26P-092</b>	Igarashi, Ryuji	27P-242, <b>BP8-1</b>
Hugel, Thorsten	25P-113	Ihara, Ayaka	27P-120
Huiskonen, Juha	*S19, <b>S19-6</b>	Ihara, Yusuke	28P-188
Humbel, Bruno M.	26P-175, 26P-176	Iida, Atsushi	28P-227
Hummer, Gerhard	<b>KL-2</b>	Iida, Shinji	S17-6
Humphreys, David	S30-6	Iida, Tetsushi	28P-228
Hung, Ta I	25P-024	Iino, Ryota	S16-6, 25P-115, 27P-071, 27P-084, <b>27P-106, 27P-127</b>
Hunter, Mark S.	27P-198	Iizuka, Ryo	S11-3, <b>25P-260, 28P-235</b>
Hussain, Hazrat	26P-190	Ijichi, Chiori	28P-188
Hyashi, Kiichi	26P-042	Ijiri, Takashi W	<b>28P-252</b>
Högbom, Martin	28P-024	Ikeda, Kazuho	28P-085
		Ikeda, Kazushi	26P-123
		Ikeda, Keisuke	26P-060, 26P-142, 27P-066
		Ikeda, Kouki	28P-261
		Ikeda, Mao	<b>28P-116</b>
		Ikeda, Mitsuru	25P-031
		Ikeda, Toma	<b>25P-060</b>
		Ikeda, Zenki	26P-133
		Ikeguchi, Masamichi	28P-007, <b>28P-036,</b> 28P-040
		Ikeguchi, Mitsunori	27P-097, 27P-212, 28P-002, 28P-183, 28P-199, 28P-222
		Ikei, Mai	26P-034
		Ikeya, Teppei	S10-3
Ibarra, Borja	26P-113		
Ibuki, Kawamata	27P-109		
Ichida, Hikaru	<b>26P-250</b>		
Ichihashi, Norikazu	28P-133		
Ichikawa, Masatoshi	25P-132, 27P-109, 27P-234, <b>28P-107, 28P-223</b>		
Ichikawa, Muneyoshi	25P-003, 26P-010, <b>26P-034</b>		
Ichikawa, T.	26P-252		
Ichikawa, Takehiko	<b>25P-240, 25P-245,</b> 26P-244, 26P-250		

Ikezaki, Keigo	25P-101	Inoue, Akio	28P-090
Iki, Taichiro	25P-166	Inoue, Asuka	25P-111, 28P-016
Ikuta, Tatsuya	28P-016	Inoue, Keiichi	*S23, 25P-067, 25P-171,
Ilca, Serban L.	S19-6	<b>25P-180</b> , 26P-166, 26P-170, 27P-072, 28P-147	
Ilie, Ioana Mariuca	<b>28P-030</b>	Inoue, Mariko	27P-014
Im, Dohyun	<b>27P-077</b> , 28P-029	Inoue, Masao	28P-199
Im, Haeri	<b>28P-204</b>	Inoue, Masayo	*S5, 26P-266, <b>27P-233</b>
Im, Wonpil	*HT-C, <b>HT-C-6</b>	Inoue, Rintaro	28P-008
Imada, Katsumi	25P-031, 26P-126, 27P-126,	Inoue, Rintaro	26P-226, 28P-231
	27P-129, 28P-054, 28P-137	Inoue, Tomoyoshi	<b>26P-178</b>
Imai, Hiroo	26P-167, 27P-166, 27P-167	Inoue, Yasuhiro	HT-E-3, 25P-220, *SS-1,
Imai, Masayuki	25P-184, 25P-190, 27P-184,		<b>SS-1-4</b>
	27P-190, 28P-270	Inoue, Yuichi	<b>BP5-2</b>
Imai, Shosei	<b>27P-240</b> , 27P-244	Inukai, Shino	<b>27P-168</b>
Imai, Takeshi	26P-259	Inutsuka, Yugo	<b>27P-246</b>
Imai, Tomoya	28P-041	Inuzuka, Haruna	<b>27P-004</b>
Imamoto, Naoko	S11-1	Inácio Ramos, Carlos Henrique	27P-158
Imamoto, Yasushi	26P-035	Irie, Misato	28P-251
Imamura, Hiromi	<b>28P-054</b>	Irisa, Masayuki	<b>27P-034</b> , 27P-272, 28P-019
Imamura, Ryuki	26P-178, 27P-242	Isa, Shinryu	<b>27P-048</b>
Imashimizu, Masahiko	<b>28P-081</b>	Ishibashi, Kenta	28P-110
Imayoshi, Ryuta	28P-201, <b>28P-232</b>	Ishibashi, Kojiro	25P-240
Imbrici, Paola	25P-272	Ishibashi, Tomoki	<b>HT-E-2</b>
Imi, Takuma	27P-033	Ishida, Hisashi	<b>28P-069</b>
Inaba, Kazuo	25P-128	Ishida, Momoko	26P-012
Inaba, Kenji	27P-014	Ishida, Tsubasa	S30-6
Inaba, Megumi	S8-5	Ishidate, Fumiyoshi	26P-253
Inaba, Satomi	S16-7	Ishigane, Genki	28P-244
Inagaki, Naoyuki	25P-216	Ishihara, Keisuke	S4-2
Inagaki, Shigenori	<b>26P-259</b>	Ishihara, Shuji	25P-278, 26P-222, 27P-232,
Inagaki, Tomomi	<b>25P-178</b> , 27P-173		28P-084
Inasaki, Noriko	28P-261	Ishihara, Tsubasa	<b>26P-109</b>
Inatsu, Yu	25P-180	Ishii, Hiroto	<b>25P-103</b>
Inou, Ryutaro	25P-097	Ishii, Mei	<b>28P-061</b>
Inoue, Akihito	25P-257	Ishii, Shuya	<b>YF-8</b> , <b>25P-100</b>

# Chairs and Speakers Index

Ishijima, Akihiko	28P-122	Itoh, Shigeru	25P-177, 28P-153
Ishikawa, Shumpei	25P-039	Itoh, Tetsuji	26P-270
Ishikita, Hiroshi	25P-041	Itoh, Yuji	26P-054, 26P-262, <b>27P-264</b>
Ishimoto, Yukitaka	<b>28P-080</b>	Itou, Nayu	27P-135
Ishioka, Noriko	27P-258	Iwabuchi, Shoji	<b>28P-078</b>
Ishiwata, Shin'ichi	YF-8, 25P-100	Iwadate, Yoshiaki	25P-122, 25P-123, 25P-124
Ishiyama, Tatsuya	28P-195	Iwaki, Mitsuhiro	*S6, <b>S6-4</b> , 25P-101
Ishizaka, Masato	<b>25P-002</b>	Iwaki, Nanako	27P-066
Ishizaka, Ryu	27P-151	Iwama, Yuki	27P-262
Iskrak, Sofia	S9-2	Iwamoto, Hiroyuki	<b>25P-128</b> , 28P-110, 28P-118
Isogai, Tatsuki	<b>26P-242</b>	Iwamoto, Koji	<b>27P-139</b>
Isvoran, Adriana	28P-175	Iwamoto, Masayuki	28P-126, <b>28P-129</b>
Itakura, Shota	<b>26P-172</b>	Iwamoto, Yuichiro	<b>25P-258</b>
Itano, Keiko	27P-252	Iwane, Atsuko H.	26P-227
Ito, Atsushi	25P-181, 27P-181	Iwasaki, Hirohide	27P-136
Ito, Chizuru	28P-085	Iwasaki, Shintaro	*S8, S8-3
Ito, Keisuke	25P-260, 26P-259	Iwasaki, Wataru	25P-012, 25P-014, 28P-166
Ito, Kohji	26P-103, 27P-030, 27P-031, 27P-033	Iwashita, Misato	<b>S2-3</b>
Ito, M.	26P-252	Iwata, Seiya	27P-069
Ito, Moka	26P-145, 26P-148	Iwata, So	27P-077, 28P-016, 28P-029
Ito, Nobutoshi	25P-008	Iyer, Parameswar	27P-241
Ito, Sae	<b>25P-039</b>	Iyoda, Yudai	<b>26P-232</b> , 27P-244
Ito, Shingo	<b>25P-208</b>		
Ito, Shiori	<b>27P-262</b>		
Ito, Shun	27P-082		
Ito, Taichi	<b>26P-214</b>		
Ito, Takuya	26P-013		
Ito, Tomoko	28P-027		
Ito, Tomoyuki	<b>27P-055</b>		
Ito, Yuki	<b>28P-222</b>		
Ito, Yuma	<b>26P-169</b> , <b>28P-241</b>		
Ito, Yutaka	S10-3, 28P-152		
Itoga, Hiroya	27P-252		
Itoh, Hiroyasu	26P-108		
Itoh, Satoru G.	25P-215, 26P-215, 28P-058		
		<b>J</b>	
		J. William Barker, J. William	S20-4
		Jaafari, Hana	25P-217
		Jang, Hyunbum	25P-213
		Jang, Jeong Ho	27P-020
		Janmey, Paul	<b>S12-4</b>
		Jantarit, Nawee	<b>26P-004</b>
		Jauffred, Liselotte	S26-5
		Jauhari, Insyeerah	26P-049
		Jayyinnunniya, Helmia	<b>26P-203</b> , 26P-205
		Jeong, Jaehyeon	S13-5, 27P-020

Jerala, Roman	<b>S17-1</b>	Kabir, Ahasanul	28P-180
Jernigan, Robert L	<b>25P-036</b>	Kabir, Arif Md. Rashedul	28P-223
Jha, Anupam Nath	25P-015	Kadowaki, Souta	<b>27P-206</b>
Jia, Kejue	25P-036	Kaestel-Hansen, Jacob	S29-4
Jia, Tony Z	<b>25P-182</b>	Kagawa, Yuki	25P-107
Jia, Tony Z.	*S32, 25P-183	Kagechika, Hiroyuki	25P-008
Jian-Ren, Shen	25P-175	Kahyo, Tomoaki	25P-247
Jiang, Yi Xiao	S25-3	Kai, Sakata	<b>25P-251</b>
Jiang, Yidan	S9-2	Kai, Toshie	25P-166
Jiko, Chimari	28P-067	Kaila, Ville R. I.	28P-024
Jimbo, Mitsuru	26P-012	Kaito, Kota	27P-114
Jin, Fei	26P-010	Kaizu, Hiroki	27P-107
Jin, Ruitao	25P-074, <b>25P-218</b>	Kaji, Hirokazu	28P-104
Joachimiak, Lukasz	*S25, <b>S25-7</b>	Kajimoto, Haruya	<b>26P-042</b> , 28P-003
Joachimiak, Lukasz A.	MS3-1	Kajimoto, Shinji	25P-048, 25P-154, 25P-228, 25P-244, 25P-248, 26P-154
Johanovská, Zuzana	<b>26P-139</b>	Kajino, Yuko	S25-5
Johnson, Jerome	27P-198	Kajita, Masashi K.	<b>27P-230</b>
Jokura, Kei	25P-128	Kakimi, Kazuhiro	28P-250
Joseph, Jerelle A	<b>BPS</b>	Kakizawa, Shigeyuki	27P-119, 27P-121, 27P-183
Joseph, Jerelle A.	25P-203	Kakizuka, Taishi	27P-252
Joshi, Tanuja	<b>26P-114</b>	Kakugo, Akira	25P-132, 27P-109, 28P-223
Jost, Daniel	<b>S29-2</b>	Kalathingal, Mahroof	S21-4
Ju, Sangmin	<b>27P-020</b>	Kamagata, Kiyoto	26P-060, 27P-064, <b>27P-066</b>
Jung, Jaewoon	25P-102, 25P-159, <b>25P-214</b>	Kamata, Kenichi	25P-061
Jung, Yongwon	<b>SS-2-3</b>	Kamatani, Takashi	28P-251
Jungmann, Ralf	S1-3	Kamba, Keisuke	<b>S19-5</b>
Jülicher, Frank	S26-6	Kambe, Yuki	26P-259
<b>K</b>			
K C, Biplab	25P-158, 26P-155	Kameda, Tomoshi	27P-066, 28P-134
Kabashima, Yoshiyuki	25P-139	Kamei, Ken-ichiro F.	<b>S5-4</b> , 27P-231
Kabata, Hiroki	28P-251	Kamei, Shoma	<b>27P-237</b>
Kabayama, Kazuya	<b>28P-060</b>	Kamei, Yasuhiro	27P-172
Kabayama, Sukehiro	<b>26P-160</b>	Kamijo, Yuki	28P-056
		Kamikubo, Hironari	26P-035, 26P-042,

# Chairs and Speakers Index

	28P-003, 28P-148	26P-101, 27P-162, 27P-179, 27P-182, 28P-172,	
Kamimura, Atsushi	<b>25P-232</b> , 25P-233		<b>28P-234</b>
Kamimura, Shinji	<b>28P-118</b>	Kanemaki, Masato T.	S11-1
Kamimura, Yoichiro	27P-143	Kanematsu, Daisuke	25P-216
Kaminaka, Toshiaki	<b>BP15-1</b>	Kanemura, Yonehiro	25P-216
Kaminishi, Tatsuya	27P-245	Kang, Moo-Koo	26P-251
Kamiya, Genta	26P-046	Kani, Mizusa	<b>27P-166</b>
Kamiya, Koki	HT-D-5, 25P-059, 25P-140, 25P-141, 25P-189, 25P-262, 26P-071, 26P-072, 26P-086, 26P-151, 26P-185	Kanno, Miki	26P-242
Kamiya, Mako	<b>HT-A-2</b>	Kanno, Ryo	26P-175
Kamiyama, Yukinari	<b>26P-015</b> , 27P-104	Kano, Hideaki	27P-146
Kamizawa, Hiroshi	25P-158, 26P-155	Kano, Kohei	26P-018, 27P-037
Kamo, Akari	<b>25P-155</b>	Kanoh, Shogo	<b>25P-038</b>
Kamo, Takanari	28P-152	Kanwa, Nishu	<b>S9-4</b>
Kamoshita, Karen	<b>26P-245</b>	Karasuyama, Masayuki	25P-180
Kan, Tetsuo	28P-103	Karmenyan, Artashes	28P-257
Kanai, Yasushi	25P-241	Karube, Yuuki	<b>27P-159</b>
Kanai, Yuki	<b>26P-182</b>	Kasahara, Keisuke	<b>26P-057</b>
Kanamori, Satoshi	<b>27P-125</b>	Kasai, Rinshi	<b>26P-117</b>
Kanamori, Takashi	*MS2	Kasai, Rinshi S.	25P-137, 25P-146
Kanaoka, Yui	26P-078, 28P-058	Kashihara, Masamune	<b>27P-205</b>
Kanbayashi, Saori	27P-064	Kashiwabara, Tomoka	<b>28P-233</b>
Kanda, Genki	<b>S31-2</b>	Kashiwazaki, Masaki	28P-151
Kandori, Hideki	25P-022, 25P-025, 25P-075, 26P-021, 26P-070, 26P-074, 26P-075, 26P-167, 26P-169, 26P-172, 26P-177, 27P-069, 27P-072, 27P-166, 27P-167, 27P-168, 27P-169, 27P-180, 28P-016, 28P-149, 28P-150, 28P-161	Kasimchetty, Arun	25P-106
Kaneda, Kazuko	28P-060	Kasu, Yuri	28P-047
Kaneda, Naoya	26P-262	Katahira, Masato	S19-5, 28P-072
Kaneko, Kunihiro	<b>KL-1</b> , 25P-234, 25P-280, 27P-217	Kataoka, Machika	<b>27P-067</b>
Kaneko, Taikopaul	25P-239	Kataoka, Michihiko	27P-160
Kaneko, Tomoyuki	25P-167, 25P-188,	Kataoka, Mikio	<b>26P-035</b>
		Kataoka, Naoya	26P-178
		Katayama, Kazuhiko	27P-261
		Katayama, Kota	*S23, 25P-075, 26P-021, 26P-167, 26P-172, 27P-069, 27P-166, 27P-167, 27P-168, 27P-169, <b>28P-016</b> , 28P-150, *BP16
		Katayama, Ryoya	<b>26P-048</b>
		Katayama, Takuya	<b>26P-262</b>

Katayama, Tokitaka	<b>26P-134</b>	Kawai, Toui	<b>25P-146</b>
Katayama, Yoshiki	25P-158, 26P-155	Kawai, Tsuyoshi	<b>27P-214</b>
Kato, Eiji	<b>26P-238</b>	Kawakami, Keisuke	28P-092
Kato, Hideaki	<b>YIA, 28P-235, BP14-1</b>	Kawakami, Masahiro	25P-282
Kato, Hiroaki	25P-073	Kawakami, Ryohei	<b>26P-028</b>
Kato, Katsuya	25P-038	Kawakami, Toru	27P-082
Kato, Koichi	25P-198, 28P-058	Kawakatsu, Toshihiro	27P-190, 28P-270
Kato, Masato	<b>S25-5</b>	Kawakita, Anju	27P-151
Kato, Minoru	27P-090, 27P-157	Kawamata, Ibuki	<b>HT-D-4, 28P-223</b>
Kato, Naoki	27P-161, <b>27P-268</b>	Kawamoto, Akihiro	26P-027, <b>28P-026,</b> 28P-092, 28P-155
Kato, Ryuichi	27P-202	Kawamura, Genki	25P-050
Kato, Satofumi	<b>26P-087</b>	Kawamura, Izuru	27P-048, 27P-072, 27P-254, <b>28P-150</b>
Kato, Shingo	<b>S22-2, 27P-121</b>	Kawamura, Kotaro	<b>28P-270</b>
Kato, Soichiro	26P-049, 26P-074	Kawanabe, Akira	<b>25P-151</b>
Kato, Suzune	27P-031	Kawano, Ryuji	26P-050, 26P-053, 26P-056, 26P-146, 27P-056, 27P-236, 27P-254, 28P-078
Kato, Takayuki	25P-083, 27P-022, 27P-036, 27P-051, 27P-077, 28P-029, 28P-092, 28P-221	Kawasaki, Masato	25P-004, 26P-003
Kato, Yuki	27P-175	Kawashima, Tatsuhiko	<b>28P-201</b>
Kato, Yuki S	27P-251	Kawata, Yasushi	27P-006
Kato, Yuki S.	<b>26P-243</b>	Kawato, Shota	27P-176
Katoh, Hiroto	25P-039	Kawauchi, Takaya	<b>26P-077</b>
Katoh, Takanobu	*S1	Kawauchi, Tatsuki	<b>27P-097</b>
Katoh, Takanobu A.	<b>S1-6</b>	Kaya, Motoshi	<b>25P-106</b>
Katsuma, Asako	25P-216	Kazami, Sayaka	26P-108
Kaur, Veerpal	<b>27P-148</b>	Kazeruni, Neda M. Bassir	25P-132
Kawabuchi, Yuna	28P-148	Kaziannis, Spyridon	S23-2
Kawada, Sakiya	27P-055	Kazuki, Ishii	<b>27P-120</b>
Kawagishi, Ikuro	25P-161, 28P-137	Kazunori, Sugiura	25P-243
Kawaguchi, Kayoko	28P-061	Keigo, Tsujii	<b>27P-208</b>
Kawaguchi, Kazutomo	26P-203, 26P-205, 26P-221, 27P-203, 27P-204, <b>28P-190,</b> 28P-201, 28P-232	Keiichi, Inoue	25P-172
Kawaguchi, Risa Karakida	<b>27P-098</b>	Keller, Sandro	<b>27P-075</b>
Kawahara, Yuu	<b>26P-261</b>	Kenmotsu, Naoya	25P-179
Kawahata, Tomoko	25P-184	Kennis, John T.M.	<b>S23-2</b>

# Chairs and Speakers Index

Kenri, Tsuyoshi	27P-189	Kimura, Akihiro	<b>25P-177</b> , 28P-153
Kepceoglu, Abdullah	27P-198	Kimura, Atsushi	27P-258
Kesherwani, Manish	<b>25P-222</b>	Kimura, Haruto	<b>27P-105</b>
Khiewdee, Charal	<b>26P-209</b>	Kimura, Hironori	<b>27P-042</b>
Kholina, Ekaterina G.	27P-226	Kimura, Hiroshi	25P-240
Kickuth, Alison	S2-4	Kimura, Ikuo	25P-072
Kidoaki, Satoru	28P-107, <b>28P-111</b>	Kimura, Kenta	28P-003
Kiga, Daisuke	27P-187, 28P-220	Kimura, Masahiko	25P-241
Kihara, Yoshiki	YF-10, 26P-263	Kimura, Tatsuya	<b>26P-066</b>
Kijima, Junko	28P-228	Kimura, Tetsunari	<b>27P-076</b>
Kikkawa, Masahide	*S3, <b>S3-2</b> , 26P-017, 27P-130, 28P-085	Kimura, Yuji	26P-108
Kikuchi, Hiroto	<b>28P-157</b>	Kimura, Yukihiko	<b>26P-175</b> , 26P-176
Kikuchi, Macoto	<b>26P-224</b>	Kimura, Yusuke	27P-258
Kikuchi, Takeshi	<b>28P-180</b>	Kinami, Yuta	<b>26P-248</b>
Kikuchi, Yoshitomo	28P-103	King, Neil	S17-4
Kikukawa, Takashi	25P-025, <b>28P-145</b>	Kinjo, Masataka	<b>25P-242</b>
Kikumoto, Mahito	26P-145, 26P-148, 28P-132	Kino-oka, Masahiro	25P-267
Kilinc, Mesih	25P-036	Kinoshita, Masanao	<b>S9-5</b> , 26P-147
Kim, Byungju	28P-098	Kinoshita, Miki	<b>25P-130</b> , 26P-126, 26P-129, 27P-013, 27P-129
Kim, Deukyeong	S13-5	Kinoshita, Seiichiro	<b>27P-123</b>
Kim, Doory	*S15, <b>S15-5</b>	Kinoshita, Yuna	25P-035, <b>27P-029</b>
Kim, Eunyoung	<b>27P-078</b>	Kinosita, Yoshiaki	<b>S16-4</b>
Kim, Ho Min	*S7, <b>S7-2</b>	Kirita, Yuhei	28P-261
Kim, June Hyung	SS-1-2	Kise, Ryoji	28P-029
Kim, Junil	28P-226	Kise, Yoshiaki	27P-014, 27P-025
Kim, Sangjin	<b>S15-3</b>	Kishi, Hiroyuki	28P-261
Kim, Seongho	<b>25P-269</b>	Kishikawa, Jun-ichi	25P-105, 27P-077, 28P-029
Kim, Sung Hyun	*S18, <b>S18-3</b>	Kishikawa, Shotaro	28P-228
Kim, Sunghyun	27P-078	Kishimura, Akihiro	<b>25P-158</b> , 26P-155
Kim, Taeyoon	26P-218, <b>SS-1-2</b>	Kita, Shunsuke	27P-262, <b>28P-261</b>
Kim, Yong-Jin	26P-251	Kita, Tomoki	<b>25P-104</b>
Kim, Yoonki	28P-098	Kitada, Nobuo	26P-046
Kimizono, Tatsuhiko	27P-199	Kitagawa, Saho	27P-052
Kimura, Akatsuki	S26-3, <b>26P-133</b> , 26P-134		



Kitagawa, Yumi	25P-030	Knorr, Roland L.	<b>S28-3</b> , 27P-144
Kitaguchi, Akito	<b>27P-072</b>	Knowles, Tuomas	S28-5
Kitaguchi, Tetsuya	25P-056, 25P-058, 25P-065, 25P-257	Knyazev, Denis	28P-014
Kitahara, Ryo	27P-155, <b>28P-134</b>	Knyazev, Denis G	<b>26P-190</b>
Kitahata, Hiroyuki	28P-128	Ko, Chih-Chieh	25P-275
Kitajima-Ihara, Tomomi	27P-175	Ko, Junsu	27P-008, 28P-213
Kitamura, Akira	25P-242, 27P-083	Kobayashi, Akiko	25P-246
Kitamura, Akita	27P-249	Kobayashi, Chigusa	25P-102
Kitamura, Keiji	<b>27P-155</b>	Kobayashi, Kazuhiro	S7-1, 28P-235
Kitamura, Mai	<b>26P-024</b>	Kobayashi, Mika	<b>26P-158</b>
Kitamura, Yoshiichiro	26P-160	Kobayashi, Natsuko I.	25P-011
Kitao, Akio	26P-197, 27P-017, <b>27P-036</b> , 27P-195, 27P-199, 28P-186	Kobayashi, Ren	26P-077
Kitazawa, Soichiro	27P-155, 28P-134	Kobayashi, Ryoga	<b>25P-066</b> , 28P-045
Kito, Kentaro	25P-167, 26P-101, 27P-162, 27P-179, 28P-234	Kobayashi, Ryohei	<b>28P-091</b>
Kitoh, Hirotaka	28P-153	Kobayashi, Ryoma	27P-005
Kitoh-Nishioka, Hirotaka	25P-177	Kobayashi, Takuya	27P-069, 28P-016
Kiyama, Hana	26P-118, <b>27P-119</b> , 27P-121, 27P-124, 27P-125, 27P-133, 27P-188, 27P-189, 28P-113	Kobayashi, Tetsuya	S14-4, 25P-229
Kiyooka, Ryota	26P-228	Kobayashi, Tetsuya J.	25P-227, 25P-232, <b>25P-233</b>
Kiyotaka, Tokuraku	26P-032	Kobayashi-Kirschvink, Koseki	S5-4
Kiyotani, Tamiko	<b>27P-050</b>	Kobirumaki-Shimozawa, Fuyu	YF-8, 25P-100
Klaholz, Bruno	28P-034	Kobori, Yasuhiro	27P-076
Klein, Christian	S1-3	Koch, Hans-Georg	28P-014
Kleine-Doepke, Stephan	S7-4, <b>27P-047</b>	Kodama, Hiroko	<b>25P-228</b>
Klempahn, Sophie	<b>25P-092</b>	Kodama, Tadashi	28P-045
Klonecka, Agnieszka	<b>25P-007</b>	Kodama, Takashi S.	25P-066
Kloz, Miroslav	S23-2	Kodera, Noriyuki	S8-5, *HT-B, HT-B-6, 25P-052, 25P-212, 26P-066, 26P-245, 26P-250, 27P-079, 27P-080, 28P-101
Kluger, Ronald	25P-002	Kodera, Yoshio	26P-013, 26P-052
Klupa, Tomasz	25P-271	Koezuka, Masato	27P-153
Klymchenko, Andrey	S9-2	Koga, Keisuke	<b>25P-248</b>
Knight, Frank M.	27P-098	Koga, Nobuyasu	*PL-3, 25P-064, 28P-052
		Koga, Ryuichi	27P-183
		Kohara, Shinji	27P-005

# Chairs and Speakers Index

Kohyama, Shunshi	25P-235	Kondo, Yohei	26P-246
Koike-Tani, Maki	28P-141	Kondoh, Kazunori	28P-160
Koiwa, Hiroaki	27P-127	Kongkaew, Nalinee	25P-120
Kojima, Chojiro	28P-045	Konishi, Yoshiyuki	27P-230
Kojima, Hiroaki	28P-110	Konishi, Yuta	<b>27P-044</b>
Kojima, Kaito	27P-118	Konno, Hiroki	S8-5, 26P-066, 27P-015, 28P-006
Kojima, Keiichi	25P-179, 27P-171, <b>28P-146</b>	Konno, Masae	25P-172, 25P-180, <b>28P-147</b>
Kojima, Masaru	<b>25P-282</b>	Konno, Tomohiro	25P-248
Kojima, Masayasu	28P-029	Kono, Hidetoshi	26P-094, 26P-207, 28P-069
Kojima, Risa	<b>26P-174</b>	Kono, Hiroki	25P-042
Kojima, Ryo	<b>25P-126</b>	Kono, Y.	26P-252
Kojima, Ryohei	27P-269	Konstantoulea, Katerina	S25-2
Kojima, Ryosuke	25P-258	Kontoravdi, Cleo	S20-3
Kojima, Seiji	*S30, 25P-031, <b>27P-127</b> , 27P-128, *BP4	Koreeda, Akitoshi	28P-271
Kojima, Yukie	25P-178	Kosaka, Mio	25P-128
Kok Sim, Chan	28P-003	Kosaka, Yuishin	25P-186, <b>25P-187</b>
Koliyadu, Jayanath	28P-011	Kosei, Nozaki	<b>26P-191</b>
Kollewe, Martin	S7-4	Koslowski, Thorsten	25P-199
Koltover, Vitaly K	<b>26P-107</b>	Kosodo, Yoichi	S2-3
Komatsu, Hideyuki	<b>27P-135</b>	Kosuge, Yume	<b>25P-262</b>
Komatsu, Ryota	27P-141	Kosugi, Takahiro	<b>28P-052</b>
Komatsuzaki, Tamiki	25P-129, 25P-230, <b>27P-221</b> , 27P-228, 27P-247, 27P-248, 27P-255	Kosumi, Daisuke	26P-174
Komi, Yusuke	S8-5	Kot, Erik	<b>27P-074</b>
Komiya, Ken	<b>28P-077</b>	Kotani, Takahiro	<b>28P-259</b>
Komoto, Runa	<b>27P-031</b>	Kotarba, Andrzej	28P-211
Komura, Daisuke	25P-039	Kotaro, Oyama	28P-023
Komura, Naoko	26P-138	Koteishi, Hiroyasu	26P-027
Konagaya, Yumi	<b>S31-6</b> , <b>25P-054</b>	Koti, A.S.R.	25P-049
Kondo, Hinase	26P-179	Koua, Faisal	<b>28P-011</b>
Kondo, Hiroko X	<b>26P-206</b>	Kousaka, Jin	<b>26P-227</b>
Kondo, Keiko	28P-072	Kovalchuk, Svitlana	<b>28P-256</b>
Kondo, Ryoya	<b>27P-247</b> , <b>27P-248</b>	Kovalenko, Eugene	28P-064
Kondo, Toru	27P-173	Kovalenko, Ilya B.	27P-226
		Kovalova, Terezia	28P-024

Kowalewski, Rafal	S1-3	Kumar Singh, Ajit	25P-015
Koyama, Hiroshi	<b>26P-225</b>	Kumar, Amarjeet	26P-094
Koyama, Masaki	25P-193	Kumari, Kritika	28P-010
Koyanagi, Mitsumasa	27P-168	Kumashiro, Munehiro	26P-258, <b>27P-032</b>
Kozak, Maciej	25P-007	Kumeta, Hiroyuki	26P-018, 27P-037
Kozelka, Jiri	<b>26P-031</b>	Kumpula, Esa-Pekka	S19-6
Kozome, Dan	<b>25P-026</b>	Kunstar-Thomas, Aliz	26P-116
Krapp, Lucien Fabrice	<b>28P-055</b>	Kupitz, Christopher	27P-198
Krayukhina, Elena	S8-5	Kuragano, Masahiro	26P-033
Kreiter, Juergen	27P-070	Kurebayashi, Nagomi	25P-073
Kreiter, Jürgen	26P-079	Kurihara, Marie	27P-171
Kremer, Nora	<b>25P-199</b>	Kurimoto, Eiji	25P-198
Kristianto, Esther	25P-023	Kurinomaru, Takaaki	S8-5
Krmpot, Aleksandar	25P-254	Kurusu, Genji	26P-004, 26P-027, 28P-026, 28P-155, 28P-191
Krull, Alexander	25P-258	Kurusu, Minoru	<b>25P-190</b> , 27P-190
Król, Sylwia M.	28P-024	Kurusu, Yuto	28P-250
Kubisiak, Agata	25P-271	Kurita, Ryoji	YF-10, 26P-263
Kubisiak, Piotr	28P-211	Kuroda, Daisuke	26P-057, 27P-058, 28P-049
Kubo, Shintaroh	<b>25P-017</b> , 27P-108, 27P-209	Kuroda, Momose	<b>26P-012</b>
Kubo, Toshiki	27P-245	Kuroda, Shinya	26P-216, 27P-244
Kubota, Ryou	<b>25P-191</b>	Kurokawa, Yumiko	25P-052
Kudo, Akiko	25P-240	Kurosaka, Toru	<b>27P-102</b>
Kudo, Genki	<b>28P-187</b> , 28P-188, 28P-189	Kurpiewska, Katarzyna	25P-007
Kuhara, Atsushi	25P-166, 27P-045	Kuruma, Yutetsu	<b>S20-2</b>
Kuhara, Atushi	25P-043	Kurumida, Yoichi	S17-6
Kujirai, Tomoya	S11-3, 28P-027	Kurumizaka, Hitoshi	S11-3, S13-3, 27P-092, 28P-027
Kukura, Philipp	26P-026	Kusakizako, Tsukasa	27P-001
Kulakman, Cahine	27P-198	Kusano, Ryo	27P-066
Kulbatskii, Dmitrii	28P-064	Kusay, Ali Saad	<b>26P-201</b>
Kulig, Waldemar	<b>28P-211</b>	Kushima, Yoshie	27P-013
Kumagai, Sari	28P-150	Kusuma, Subhan Hadi	<b>25P-259</b>
Kumagai, Shinya	28P-248	Kusumi, Akihiro	25P-146
Kumagai, Shunsuke	27P-102	Kuwabara, Hiromu	27P-118
Kumaki, Yasuhiro	26P-018, 27P-037		
Kumamoto, Yasuaki	26P-100		

# Chairs and Speakers Index

Kuwana, Satoshi	25P-278	Lee, Hakyung	<b>27P-059</b>
Kuwata, Takumi	28P-036, <b>28P-040</b>	Lee, Hye-Eun	26P-181
Kuwayama, Hidekazu	YF-7, 28P-230	Lee, Jinseob	<b>28P-098</b>
Kuzuya, Akinori	<b>HT-D-2</b>	Lee, Jong-Bong	<b>S27-4</b>
Kuzuyama, Tomohisa	25P-083	Lee, Jongbong	28P-098
Kyselka, Jan	27P-259	Lee, Jonghwan	27P-078
Köster, Sarah	*S12, <b>S12-3</b>	Lee, Julian	<b>28P-226</b>
		Lee, Junho	<b>26P-157</b>
		Lee, Juyong	27P-008, 27P-059, 28P-185, 28P-213
		Lee, Li-Ching	28P-143
		Lee, Ming-Xin	<b>25P-255</b>
		Lee, Ryangguen	26P-251
		Lee, Soo Jin	27P-020
		Lee, Sumin	<b>26P-185</b>
		Lee, Won-Kyu	27P-008
		Lee, YigJi	<b>26P-268</b>
		Lee, Yongchan	<b>S3-6</b> , 27P-004, 28P-001, 28P-004
		Lee, Yongchang	28P-002
		Lee, Yuan-E	<b>27P-071</b>
		Lefebvre, Austin	S1-5
		Lehane, Adele	25P-074
		Lehmkuhler, Felix	26P-260
		Leighton, Matthew	S16-3
		Leimkohl, Jan-Philipp	S7-4
		Leon, Marco P. De	HT-E-5
		Leong, Kim Whye	S2-1, 27P-099
		Leys, David	26P-016
		Li, Cheng	S28-4
		Li, Chun-Biu	*KL-1, *S26
		Li, Chunhua	27P-222
		Li, Chunyangguang	<b>25P-171</b>
		Li, Hongjie	<b>YF-2</b> , <b>25P-176</b>
		Li, Hualin	<b>26P-059</b>
<b>L</b>			
Labrijn, Aran F.	25P-029		
Laddha, Aditi	<b>27P-027</b>		
Lagos, Miguel	26P-026		
Lagüe, Patrick	28P-272		
Lakatos, Andras	*S31, <b>S31-3</b>		
Lam, Vi Toan	<b>26P-197</b>		
Lam, Wendy Wai Ling	S30-2		
Lander, Gabriel	<b>S3-5</b>		
Landreh, Michael	25P-071		
Lankage, Upeksha Mirissa	25P-142		
Latham, Andrew	28P-136		
Lau, Chun Hon	25P-206		
Lau, Zi Hui	<b>25P-227</b>		
Laughton, Charles	26P-083		
Lauria, Fabio	S25-8		
Laurino, Paola	<b>S17-2</b> , 25P-026, 26P-058		
Lavrova, Anastasia	25P-163, 25P-237, 26P-162, <b>26P-234</b>		
Lazzeri, Gianmarco	25P-160		
Le Brun, Anton P.	25P-147		
Lechner, Antony	28P-034		
Lee, Byeong-Min	27P-215		
Lee, Byoung-Cheol	27P-078		
Lee, Cynthia Wei Sheng	28P-121		
Lee, Gwangrog	<b>28P-094</b>		

Li, Hung-Wen	<b>25P-082</b>	Liu, Yahui	26P-030
Li, Isaac T.S.	25P-269	Liu, Yan	26P-030
Li, Jiannan	28P-067	Liu, Yifan	<b>25P-172</b>
Li, Jiaxuan	HT-C-2	Liu, Ying	25P-268, <b>28P-240</b>
Li, Qiaojing	25P-050	Liu, You-Hsuan	<b>26P-264</b>
Li, Rong	<b>KL-3</b>	Liu, Ziwei	26P-033
Li, Sai	<b>S19-3</b>	Loo, Daniel	S32-3
Li, Tianjie	25P-206, <b>27P-197</b>	Lopes, Catarina	26P-269
Li, Wenfei	S28-4, 25P-020	Lopes-Nunes, Jessica	25P-283
Li, Xinyuan	<b>28P-221</b>	Lou, Yuting	S2-1
Li, Yamei	26P-181	Loura, Luís M. S.	25P-079
Li, Yiling	<b>25P-050</b>	Louros, Nikolaos	S25-2
Liang, Mengling	27P-198	Loutchko, Dimitri	25P-233
Liang, Weibo	<b>26P-073</b>	Lowe, Lauren A.	S32-3
Liantonio, Antonella	25P-272	Lu, Chia-Hua	25P-082
Lichtarge, Sara	S24-3	Lu, Wei-Lin	25P-024, <b>27P-010</b> , 27P-062
Lieleg, Oliver	25P-112	Lu, Ying-Chang	28P-198
Liin, Sara	26P-201	Lubna, Syeda	28P-179
Lim, Hyun-Ho	<b>ABA-6</b>	Lunelli, Lorenzo	S25-8
Lim, Keesiang	25P-246	Luo, Joshua	25P-081
Lim, Shu En	<b>25P-099</b>	Lyasota, Oksana	28P-192
Lin, Angela	S30-6	Lynch, Kelli Ann	25P-268
Lin, Ching-Yang	YF-5, 26P-041	Lyon, Daniel	S24-3
Lin, Keng-Hui	HT-E-5, 26P-264	Lyu, Zikun	<b>26P-166</b>
Lin, Pei-Jung	28P-143	Lyukmanova, Ekaterina	27P-074, 28P-064
Lin, Shih Ting	28P-121	Lévy, Daniel	S29-4
Lin, Tzu Yu	28P-121		
Lin, Yi-Yu	26P-010		
Lin, Yiechang	<b>27P-220</b>		
Lin, You-Rong	28P-101		
Lindah, Erik	25P-071		
Liu, Bing	26P-030		
Liu, Changdong	S27-5		
Liu, Hanjin	<b>26P-017</b> , 28P-117		
Liu, Shixin	<b>S27-3</b> , 25P-081		
		<b>M</b>	
		Ma, Wei	28P-163
		Mabuchi, Takuya	27P-156
		MacAry, Paul	S19-2, 25P-266
		Machida, Manabu	25P-247
		Machida, Masato	<b>25P-244</b>
		Machuqueiro, Miguel	26P-025, 27P-201,

# Chairs and Speakers Index

		27P-216	Makino, Tsukasa	<b>28P-085</b>
Macome, Julieta	<b>26P-184, 28P-168</b>		Makino, Yoichi	*BP10, BP10-1
Madigan, Michael T.	26P-175, 26P-176		Makrydaki, Elli	S20-3
Madoka, Suzuki	28P-023		Maksimov, Georgy	25P-270
Maeda, Aoi	<b>28P-004</b>		Maldonado, Andreu Mor	25P-061
Maeda, Hiroki	<b>26P-204</b>		Maltsev, Valeri	28P-269
Maeda, Kiminori	27P-005, 28P-151		Mameuda, Aoi	<b>26P-086</b>
Maeda, Mayu	S9-5		Manabe, Yoshiyuki	28P-060
Maeda, Mika	26P-180		Mancuso, Adrian	28P-011
Maeda, Munetoshi	<b>26P-180</b>		Mangal, Meenu	25P-274
Maeda, Shunsuke	27P-245		Mansy, Sheref	<b>S20-1</b>
Maeda, Sumihiro	27P-268		Mansy, Sheref S.	*S20
Maeda, Yasuhiro	<b>28P-247</b>		Manubens, Augusto	27P-007
Maeda, Yusuke T	<b>HT-E-1</b>		Mao, Eric Yin-Chen	<b>27P-016</b>
Maeda, Yusuke T.	28P-233		Mao, Yanlan	*S2, S2-2, 25P-099, 26P-267
Maekawa, Ruri	<b>S31-5</b>		Marcaida, Maria J.	25P-028, 26P-019
Maenaka, Katsumi	*S19, S19-4, 26P-055, 27P-262, 28P-261		Marciniak, Antoni	<b>25P-200</b>
Maeno, Akiteru	HT-E-3		Marek, Radek	26P-031
Maeoka, Haruka	27P-242		Maristany, M. Julia	S24-5
Maes, Wim	25P-061		Maristany, Maria Julia	S21-2, <b>26P-092</b>
Maeshima, Kazuhiro	S11-1, S13-7, *S24, <b>S24-2</b>		Markiewicz, Joanna	28P-079
Maestre-Reyna, Manuel	26P-168		Marklund, Erik G	25P-071
Magalon, Axel	S30-1		Marla, Mithali Raj	26P-272, <b>27P-271</b>
Magi, Yasuhiro	26P-183		Marla, Shailaja Raj	<b>26P-272</b> , 27P-271
Mahmood, MD. Iqbal Iqbal	<b>27P-209</b>		Marshall, Oscar	S20-3
Maita, Nobuo	S25-5		Martinez, Roberto	28P-035
Maki, Koichiro	<b>YF-6, 26P-082</b>		Martinez-de-Tejada, Guillermo	28P-127
Maki, Kosuke	26P-038		Martinez-Seara, Hector	25P-201
Maki, Shojiro	26P-046		Martynyuk, Tamila	25P-270
Maki, Takahisa	28P-129		Marui, Riku	S16-7, <b>26P-104</b>
Makiko, Kudo	26P-250		Marumo, Akisato	26P-103
Makino, Fumiaki	26P-118, 26P-129, 27P-013, 27P-036, 27P-121, 27P-126		Maruta, Shinsaku	26P-257, 27P-102, 28P-090, 28P-160
			Maruyama, Hana	<b>25P-025</b>
			Maruyama, Norifumi	26P-224

Maruyama, Tomoya	25P-086, <b>27P-085</b>	Matsui, Hayato	26P-046
Marzinek, Jan K.	<b>25P-224</b>	Matsui, Kazuma	28P-029
Marín, María del Carmen	26P-166	Matsui, Takashi	26P-013, 26P-052
Masahiro, Kuragano	26P-032	Matsui, Yukino	25P-098
Masai, Hirokazu	27P-005	Matsuki, Yoh	27P-082
Masaike, Tomoko	*S16, <b>S16-1</b> , 27P-107	Matsumori, Nobuaki	S9-5, 26P-147, <b>27P-146</b>
Masaki, Hideyuki	27P-202	Matsumoto, Gen	28P-139
Masaki, Noritaka	26P-266	Matsumoto, Genta	28P-106
Masaki, Yoshikazu	28P-125	Matsumoto, Kazuhiko	25P-241
Masayuki, Su'etsugu	26P-188	Matsumoto, Nagomi	<b>28P-159</b> , 28P-162
Masseck, Olivia A.	27P-240	Matsumoto, Sohkiichi	27P-079, 27P-080
Masuda, Kazutoshi	<b>27P-087</b>	Matsumoto, Takumi	<b>27P-104</b>
Masuda, Takeshi	28P-085	Matsumoto, Tomoharu	26P-048
Masuhara, Hiroshi	YF-5, 26P-041	Matsumoto, Yoshitaka	27P-181
Masuho, Ikuo	28P-029, 28P-178	Matsumura, Rumie	S20-2
Masui, Ayumi	27P-006	Matsunaga, Daiki	25P-279
Masui, Kyoko	27P-150	Matsunaga, Ryo	25P-039, 25P-045, 27P-057, 27P-058, 28P-049
Masujima, Yuki	25P-072		
Masullo, Luciano A.	<b>S1-3</b>	Matsunaga, Satoko	26P-012
Masumoto, Hiroshi	28P-237, 28P-238	Matsunaga, Yasuhiro	26P-219, 27P-214, 28P-210, 28P-214
Masunaga, Hiroyasu	28P-043		
Masunaga, Shin-ichiro	27P-181	Matsuo, Eiichi	<b>BP16-1</b>
Matange, Kavita	S32-1	Matsuo, Koichi	25P-051
Matejko, Bartłomiej	25P-271	Matsuoka, Satomi	25P-121, 27P-139, <b>27P-140</b>
Matoba, Kazuaki	25P-157		
Matsubara, Takumi	27P-175	Matsushima, Hideki	BP1-2
Matsuda, Akira	27P-262	Matsushima, Kanae	27P-165
Matsuda, Keisuke	28P-062	Matsushima, Keisuke	<b>26P-159</b>
Matsuda, Kyohei	26P-103	Matsushita, Daiki	<b>28P-001</b>
Matsuda, Naoki	25P-070	Matsuura, Tomoaki	*S20, 26P-056, 26P-186, 26P-223, <b>MS2-1</b>
Matsuda, Ryotarou	28P-019		
Matsuda, Ryoutarou	27P-034	Matsuura, Uchu	25P-048
Matsuda, Tomoki	27P-245	Matsuyama, Ayaka	<b>28P-073</b>
Matsuda, Yoshiki	26P-175	Matsuyama, Saki	25P-091
Matsuda, Yusuke	26P-027	Matsuzaki, Yuri	26P-193

# Chairs and Speakers Index

Matsuzawa, Shota	26P-144	Mio, Kazuhiro	25P-019, 26P-045, 27P-110, 28P-061, 28P-063, 28P-095
Matubayasi, Nobuyuki	26P-097	Mironov, Pavel	28P-064
Mayu, Enomoto	<b>28P-045</b>	Misawa, Takashi	25P-008
Mehrabi, Pedram	<b>S7-4</b> , 26P-023, 27P-047	Mishima, Masaki	28P-152
Meireles, Fernando	25P-028, 26P-019, 28P-055	Mishima, Takahide	<b>28P-086</b>
Mela, Ioanna	*S4, <b>S4-1</b>	Mishima, Yuichi	27P-082
Mendes Pedro, Luís	26P-269	Mishra, Vandana	S7-6
Meriko, Lince	26P-203	Mitani, Shohei	25P-166
Meriko, Lince -	<b>26P-205</b>	Mitani, Takahiro	S12-1, <b>27P-131</b>
Meyer, Nathan	S30-1	Mitani, Yuki	<b>26P-053</b>
Michele, Lorenzo Di	26P-186	Mitarai, Namiko	<b>S26-5</b>
Michiue, Yuki	26P-039, <b>27P-006</b> , 27P-041	Mitchell, Drake C.	28P-126
Middleditch, Martin	25P-281	Mito, Mari	S8-3
Mie, Yasuhiro	<b>25P-070</b>	Mitome, Noriyo	<b>27P-108</b>
Mifune, Konoka	26P-240, <b>26P-241</b>	Mitra, Mithun K.	26P-093
Mikami, Chitose	25P-070	Mitra, Rajib Kumar	25P-021
Mikes, Jaromir	S9-2	Mitrovic, Darko	25P-200
Miki, Kosuke	26P-038	Mitsui, Toshiyuki	27P-113, 27P-118
Mikulska-Ruminska, Karolina	<b>25P-207</b>	Mitsumatsu, Mika	27P-034, 28P-019
Milon, Pohl	27P-198	Mitsuoka, Kaoru	25P-105, 25P-109
Mimura, Mone	<b>27P-121</b> , 28P-113	Mitsuru, Hattori	25P-243
Mimura, Tomohiro	<b>25P-220</b>	Mitsutake, Ayori	27P-198, 27P-213, <b>28P-202</b>
Minagawa, Yoshihiro	26P-062, 26P-091, 26P-158, 27P-185, 28P-169, 28P-256, <b>BP10-2</b>	Miura, Hisashi	28P-174
Minakawa, Tomohiro	<b>26P-253</b>	Miura, Natsuko	<b>27P-160</b>
Minakuchi, Yohei	25P-043, 25P-166	Miura, Toru	25P-166
Minami, Atsushi	<b>25P-083</b>	Miura, Yoshinori	<b>26P-011</b>
Minami, Katsuhiko	S11-1, S24-2	Miwa, Akari	<b>26P-151</b>
Minamino, Akane	<b>26P-176</b>	Miwa, Michiko	28P-142
Minamino, Tohru	25P-130, <b>26P-126</b> , 26P-129, 27P-036, 27P-129	Miwa, Yoshihiro	<b>28P-228</b>
Mineev, Konstantin	27P-074	Miyagawa, Misato	26P-259
Minegishi, Misa	<b>YF-3</b> , <b>S6-5</b>	Miyagawa, Yasuki	26P-099
Mino, Hiroyuki	26P-175	Miyajima, Shogo	28P-058
		Miyakawa, Naruto	25P-241
		Miyamoto, Akinori	25P-091



Miyamoto, Kana	27P-261	Mizuno, Ayato	<b>25P-198</b>
Miyamoto, Kei	26P-099	Mizuno, Moeka	<b>25P-075</b>
Miyamoto, Kousei	28P-156	Mizuno, Noriaki	<b>BP1-2</b>
Miyamoto, Shuichi	28P-062	Mizuno, Shino	28P-128
Miyamoto-Kohno, Sayako	28P-027	Mizuno, Yosuke	<b>26P-167</b> , 26P-172
Miyanari, Yusuke	28P-101	Mizuno, Yuta	27P-247, 27P-248
Miyanoiri, Yohei	25P-066, 28P-045, 28P-152	Mizushima, Noboru	25P-160
Miyashita, Naoyuki	26P-228, 27P-202	Mizutani, Azuki	<b>27P-210</b>
Miyashita, Osamu	25P-010, 25P-053, 25P-174, 26P-239, 27P-193	Mizutani, Masaki	<b>27P-183</b>
Miyashita, Yasuomi	<b>26P-003</b>	Mizutani, Natsuki	25P-150
Miyata, Kaede	28P-251	Mizutani, Yasuhisa	27P-171
Miyata, Makoto	YF-4, 25P-131, 26P-118, 27P-082, 27P-119, 27P-121, 27P-122, 27P-124, 27P-125, 27P-133, 27P-188, 27P-189, 28P-092, 28P-113	Mizutani, Yuki	26P-145, <b>26P-148</b>
Miyata, Takaki	HT-E-6	Mizutori, Ritsu	<b>26P-021</b>
Miyata, Tomoko	25P-130, 26P-118, 26P-129, <b>27P-013</b> , 27P-036, 27P-121, 27P-122, 27P-126, 28P-092	Mizuuchi, Ryo	*S32, <b>28P-133</b>
Miyata, Yuki	28P-259	Mochizuki, Kentaro	26P-100, 27P-247, 27P-248
Miyata, Yusuke	<b>27P-081</b>	Mockler, Niamh M.	26P-005
Miyauchi, Seiji	28P-062	Mockler, Niamh Maria	<b>25P-261</b>
Miyawaki, Yumi	25P-187	Mogami, Yoshihiro	27P-165
Miyazaki, Makito	26P-131, 28P-050, SS-1-2, <b>BP13-1</b>	Mohammad Shahidul, Alam	<b>25P-245</b>
Miyazaki, Ryoji	26P-034	Mohammed, Tareg Omer	<b>25P-055</b> , 28P-101
Miyazaki, Takumi	25P-187	Mohandass, Shylaja	S22-1
Miyazawa, Keisuke	<b>HT-B-2</b>	Mohd Ariff, Putri Nur Arina Binti	28P-016
Miyoshi, Hiromi	25P-119, <b>25P-173</b>	Mohiuddin, M.	<b>25P-129</b>
Mizoguchi, Akira	26P-175	Moisa, Roberta	<b>27P-256</b>
Mizue, Hatsune	<b>27P-175</b>	Moisa, Roberta (Stoica)	28P-258
Mizuguchi, Kenji	26P-211	Mokin, Yakov	26P-065
Mizukami, Taku	<b>28P-083</b>	Momose-Sato, Yoko	<b>25P-164</b> , 25P-165
Mizuki, Horyo	S12-1, <b>27P-134</b>	Monden, Keigo	26P-034
		Monson, Ebony	26P-153
		Moon, Wonjoon	27P-215
		Moore, Josh	<b>S33-5</b>
		Mora, Nestor	27P-088
		Moreira, David	25P-283
		Moreira, Irina	27P-201

# Chairs and Speakers Index

Mori, Joe	<b>26P-060</b>	Moriyama, Yuuta	27P-113, 27P-118
Mori, Kaisei	26P-175	Moro, Kazuyo	28P-251
Mori, Megumi	25P-187, 27P-038	Moroz, Gleb	28P-269
Mori, Miyu	25P-126	Morán-Lalangui, Michelle	25P-079
Mori, Seishiro	26P-069	Motohashi, Masahiro	<b>25P-102</b>
Mori, Shinichiro	27P-258	Motoyama, Kento	26P-046
Mori, Taisei	27P-264	Mueller, Stefan	25P-027
Mori, Takaharu	S10-3, 26P-034	Mueller-Dieckmann, Christoph	25P-007
Mori, Takeshi	25P-158, 26P-155	Muharror Ahsanul Husna, Syamil	<b>27P-064</b>
Mori, Toshifumi	25P-211, <b>26P-213</b>	Mujica, Nicolas	27P-270
Mori, Toshiki	<b>25P-137</b>	Mukai, Yukio	26P-229
Mori, Yujiro	<b>26P-038</b>	Mukherjee, Samrat	28P-266
Mori, Yukina	<b>25P-043</b>	Mullineaux, Conrad	S22-1
Morigaki, Kenich	27P-153	Muneyuki, Eiro	25P-102
Morigaki, Kenichi	27P-141, 27P-142	Munhoven, Arno	S23-2
Moriguchi, Kazuki	<b>25P-168</b>	Munuera, Pablo Vicente	<b>S2-2</b>
Morikawa, Kentaro	<b>HT-E-3</b> , SS-1-4	Murabe, Keisuke	28P-145
Morikawa, Kosuke	25P-030	Murai, Toshiyuki	<b>28P-125</b>
Morikawa, Motohiro	S3-2, 27P-130	Murakami, Akikazu	27P-055
Morimoto, Naoya	25P-171	Murakami, Akira	<b>27P-132</b>
Morimoto, Yusuke V	26P-135	Murakami, Tatsuya	27P-038
Morimoto, Yusuke V.	26P-122, 27P-022, 27P-177, 28P-115	Murakami, Yusuke	28P-036
Morisaki, Tatsuya	S4-3	Murakoshi, Hideji	25P-162, 26P-159
Morishima, Ken	26P-226, <b>28P-008</b> , 28P-231	Muramatsu, Daiki	26P-066
Morishita, Ryo	S19-5	Muramoto, Kazumasa	25P-069, 26P-069
Morita, Eiji	28P-263	Muramoto, Masashi	<b>27P-196</b> , 28P-262
Morita, Ritsuko	<b>S2-5</b>	Muraoka, Kohei	27P-082
Morita, Shinichi	HT-E-3	Muraoka, Takahiro	26P-024, 26P-258, 27P-002, 27P-151
Moriuchi, Akiya	25P-174	Murata, Hiroto	27P-054
Moriwaki, Yoshitaka	26P-199	Murata, Kazuyoshi	25P-031, 25P-073, 27P-071, 27P-117, 27P-261
Moriya, Rei	27P-079	Murata, Keina	26P-034
Moriya, Toshio	S16-7, 25P-004, 26P-003	Murata, Takeshi	S16-7, 25P-004, 26P-003, 27P-071, 27P-171
Moriyama, Minoru	27P-183		
Moriyama, Shunya	27P-150		

Murata, Yutaka	<b>28P-193</b>	Nagao, Kazutoshi	25P-191
Murayama, Keiji	28P-133	Nagao, Michihiro	<b>S9-6</b>
Murayama, Takashi	25P-073	Nagao, Satoshi	<b>28P-043</b>
Murayama, Yasuto	S13-2, S13-7, 25P-052	Nagao, Takemasa	28P-028
Murayama, Yoshihiro	25P-091, 26P-120	Nagaoka, Ayaka	<b>28P-236</b>
Muromoto, Masaki	<b>25P-121</b>	Nagaoka, Koji	28P-250
Murugan, Arvind	<b>S5-2</b>	Nagasaki, Akira	28P-114
Muthahari, Yusran Abdillah	<b>26P-058</b>	Nagashima, Hiroki	27P-005, <b>28P-151</b>
Muto, Osamu	<b>27P-229</b> , 28P-033	Nagashima, Toshio	27P-072, 28P-150
Muto, Yuto	26P-077	Nagata, Kazuhiro	27P-046
Muñoz, Jose J	S2-2	Nagata, Masahiro	26P-247
Muñoz, Sebastian Manuel	<b>27P-007</b>	Nagata, Takashi	S19-5, 25P-171, 25P-180, <b>26P-170</b> , 28P-072
Myers, Connie	S24-3	Nagatoishi, Satoru	25P-045, 26P-057, 27P-058, 28P-049
Mylemans, Bram	25P-063	Nagatsuka, Nanami	27P-141
Müller, Marcus	28P-219	Nagino, Kimiko	25P-107
<b>N</b>			
Nabetani, Tomoya	<b>27P-212</b>	Naito, Akira	27P-048
Nagae, Fritz	S11-3, <b>S13-2</b>	Naito, Kota	26P-050
Nagae, Takayuki	28P-152	Naito, Yuki	26P-259
Nagai, Arata	<b>27P-118</b>	Naito, Yusuke	26P-034
Nagai, Taisei	27P-033	Naka, Ayaka	27P-076
Nagai, Takeharu	*PL-1, *HT-A, <b>HT-A-1</b> , 25P-238, 25P-259, 26P-046, 27P-245, 27P-252, 28P-154, 28P-253	Nakabayashi, Takakazu	25P-048, 25P-154, 25P-228, 25P-244, 25P-248, 26P-154 26P-050, <b>27P-056</b>
Nagai, Tomoaki	<b>28P-104</b>	Nakada, Ayaka	26P-050, <b>27P-056</b>
Nagai, Yuki	<b>25P-141</b>	Nakagaki, Toshiyuki	26P-165, 28P-106
Nagakubo, Akira	25P-267	Nakagawa, Atsushi	25P-013, 28P-005
Nagamori, Sushi	28P-002, 28P-004	Nakagawa, Ichiro	25P-062
Nagano, Minoru	27P-208	Nakagawa, Reiko	S13-5
Nagano, Seido	<b>26P-161</b>	Nakagawa, Ryoya	26P-006
Naganuma, Masahiro	S13-5, <b>28P-027</b>	Nakagawa, Yoshiko	<b>S8-5</b>
Nagao, Hidemi	26P-203, 26P-205, 26P-221, 27P-203, 27P-204, 28P-190, 28P-201, 28P-232	Nakahara, Juntaro	<b>28P-002</b>
		Nakahara, Naoya	YF-8, 25P-100
		Nakai, Hiromi	26P-015
		Nakai, Nori	S1-2

# Chairs and Speakers Index

Nakai, Yukina	28P-199	Nakao, Miku	<b>25P-091</b>
Nakajima, Kichitaro	26P-064	Nakao, Shin	<b>25P-179</b>
Nakajima, Yoshiki	YF-2, 25P-176	Nakao, Toshiki	27P-090, 27P-157
Nakakido, Makoto	25P-039, 25P-062, <b>28P-049</b>	Nakaoka, Hidenori	S5-4
Nakakita, Shin-ichi	25P-241	Nakasako, Masayoshi	25P-016, 26P-248, 26P-249, 27P-096
Nakamoto, Hinano	25P-158, <b>26P-155</b>	Nakashima, Kentaro	28P-142
Nakamoto, Kaho	<b>27P-079</b> , 27P-080	Nakashima, Ryosuke	28P-005
Nakamoto, Momoka	26P-229	Nakatani, Naoki	YF-1, 27P-186
Nakamura, Akihiko	<b>28P-087</b>	Nakatani, Yuki	28P-003
Nakamura, Chikashi	28P-266, <b>28P-267</b>	Nakatsu, Toru	28P-021
Nakamura, Haruki	26P-206	Nakayama, Shintaro	<b>26P-105</b>
Nakamura, Hideki	25P-066, <b>28P-171</b> , *SS-2	Nakayama, Takahiro	S8-5, 26P-066, 26P-250
Nakamura, Jun	27P-100	Nakayama, Yohei	27P-105, 28P-086
Nakamura, Mai	26P-168	Nakayoshi, Tomoki	25P-198, <b>28P-191</b>
Nakamura, Ryuhei	25P-183, 26P-181	Nakazawa, Hikaru	27P-055
Nakamura, Shuichi	<b>S30-4</b> , 26P-109, 26P-128	Nakazawa, Yuki	<b>25P-133</b>
Nakamura, Sotaro	<b>28P-235</b>	Nam, Kwangho	<b>HT-C-3</b>
Nakamura, Taiki	27P-171	Nam, Yoonkey	<b>S18-2</b>
Nakamura, Takashi	26P-229	Namba, Keiichi	25P-130, 26P-118, 26P-126, <b>26P-129</b> , 27P-013, 27P-036, 27P-121, 27P-122, 27P-126, 28P-092
Nakamura, Toshiki	<b>26P-074</b> , 26P-075	Namba, Norihiro	<b>25P-037</b> , 25P-042
Nakamura, Yui	25P-097	Namba, Toshinori	<b>28P-084</b>
Nakamuta, Asahi	<b>S18-6</b>	Nango, Eriko	<b>S23-3</b> , 25P-174, 26P-021, 26P-207
Nakane, Daisuke	*S22, 26P-119, 26P-121, 27P-120, 27P-189, <b>28P-103</b> , 28P-112, *BP15, BP15-1	Naoi, Takuma	25P-107
Nakane, Yurina	<b>27P-242</b>	Naoki, Kawakami	26P-188
Nakanishi, Atsuko	25P-109	Naoki, Sonoyama	26P-188
Nakanishi, Tomohiro	YF-8, 25P-100	Narita, Akihiro	<b>25P-134</b> , 26P-048
Nakaniwa, Tetsuko	28P-155	Narita, Hiroto	26P-132
Nakano, Atsuki	<b>25P-105</b> , 25P-109, 26P-077	Nasrallah, Anita	25P-028
Nakano, Hiroyoshi	<b>28P-216</b>	Nasrin, Syeda Rubaiya	<b>25P-132</b>
Nakano, Miki	26P-239	Nastuki, Honda	<b>25P-170</b>
Nakano, Minoru	26P-142	Nasu, Yusuke	<b>28P-056</b>
Nakao, Hiroyuki	<b>26P-142</b>		

Natio, Kota	27P-056	Nishibe, Nobuyuki	26P-257, <b>28P-160</b>
Natsume, Koki	<b>25P-022</b>	Nishida, Aki	25P-173
Natsume, Tohru	S31-2	Nishida, Mizuho	28P-054
Natsume, Toyoaki	S11-1	Nishida, Noritaka	25P-246
Nechipurenko, Yuriy	28P-192	Nishida, Yui	<b>25P-109</b>
Negoro, Hiroto	<b>26P-027</b>	Nishida, Yuya	<b>28P-028</b>
Nehls, Christian	25P-252, <b>28P-042</b>	Nishide, Goro	<b>25P-246</b>
Nelson, Andrew	S32-3	Nishide, Ryosuke	<b>27P-232</b>
Nema, Hirofumi	<b>28P-271</b>	Nishigami, Yukinori	25P-122, 26P-165, <b>28P-106</b> , 28P-107
Nemoto, Wataru	27P-192		
New, Karina	<b>26P-026</b>	Nishiguchi, Shigetaka	<b>26P-078</b> , 26P-117, 28P-246
Newaz, MD Fahim	<b>27P-227</b>		
Ng'ang'a, Douglas	<b>28P-255</b>	Nishihara, Ryo	<b>YF-10</b> , <b>26P-263</b>
Ng, Boon Heng	S2-1	Nishikawa, Kaori	YF-3, S6-5, 25P-239
Ng, Woei Shyuan	26P-116	Nishikawa, Koji	27P-011
Ngo, Kien Xuan	<b>25P-078</b> , 28P-101	Nishikawa, Ryo	<b>27P-069</b>
Nguyen, Han Gia	<b>28P-248</b>	Nishikawa, Seiya	<b>25P-278</b>
Nguyen, Hao Thai	26P-197	Nishikawa, Shota	<b>25P-072</b>
Nguyen, Thu Trang	S26-5	Nishikawa, Takaaki	<b>27P-179</b>
Nicholls, Jordan	25P-027	Nishikino, Tatsuro	25P-031, <b>25P-076</b> ,
Nickel, Walter	25P-144		26P-075, 26P-169, 27P-127
Nicolson, Garth Lamb	27P-270	Nishikubo, Kai	28P-090
Nii, Teruki	25P-158, 26P-155	Nishimagi, Kurumi	26P-248
Niimi, Hideki	28P-261	Nishimura, Katsuyuki	28P-058
Niimi, Rintaro	<b>26P-230</b>	Nishimura, Norihiko	<b>25P-123</b>
Niimi, Teruyuki	HT-E-3	Nishimura, Taki	<b>25P-160</b>
Niimura, Nobuo	27P-050	Nishimura, Yoshifumi	26P-015
Niina, Toru	27P-108	Nishimura, Yosuke	28P-146
Niitsu, Ai	*S17	Nishinami, Suguru	28P-038
Nikelshparg, Evelina	<b>26P-068</b>	Nishino, Kunihiko	28P-005
Nikolayev, Viktor	28P-257	Nishio, Takashi	<b>25P-153</b>
Nikolic, Stanko	25P-254	Nishita, Michiru	28P-104
Nikoubashman, Arash	25P-155	Nishitani, Yudai	<b>26P-173</b>
Ninomiya, Ayumu	25P-056	Nishiyama, Akihito	27P-079, 27P-080
Ninomiya, Kensuke	25P-084	Nishiyama, Masayoshi	27P-123, <b>28P-109</b>

# Chairs and Speakers Index

Nishiyama, So-ichiro	28P-137	Nonomura, Keiko	HT-E-6
Nishizaka, Takayuki	*YF, 27P-120, 28P-112, *BP15, BP15-1	Nord, Ashley	<b>S30-1</b>
Nishizawa, Chisato	<b>25P-186</b> , 25P-187	Norden, Caren	<b>S2-6</b>
Nishizawa, Ryohei	HT-E-2	Norizoe, Yuki	25P-156
Nishizawa, Seiichi	26P-270	Norizoe, Yuuki	27P-093, 27P-159
Nishizawa, Tomohiro	27P-004, 28P-001, 28P-002, 28P-004	Noronha, Riz Fernando	<b>25P-234</b>
Nitta, R.	26P-252	Nosaka, Kota	25P-032
Nitta, Takahiro	28P-255	Novotný, Jan	26P-031
Niwa, Shinsuke	25P-104, 25P-107	Nowak, Wieslaw	25P-077
Niwa, Tatsuya	S8-5, 25P-187	Nowak, Wieslaw A	<b>28P-015</b>
Nobeyama, Tomohiro	26P-152, <b>27P-038</b>	Nozaki, Keiji	YF-3, S6-5
Noda, Nobuo	25P-157	Nozaki, Shingo	28P-228
Noda, Takeshi	25P-264, 27P-077	Nozawa, Hikaru	S11-3, 27P-092, 27P-238
Noga, Akira	25P-133	Nozawa, Kayo	<b>S13-3</b>
Noguchi, Hiroki	25P-061, 25P-063	Nozdracheva, Aleksandra	26P-098
Noguchi, Hiroshi	<b>26P-236</b>	Nozoe, Takashi	S5-4
Noguchi, Masanori	*BP14	Nuemket, Nipawan	26P-021
Noguchi, Takumi	27P-175	Nunes Evangelista, Nathan	<b>HT-D-5</b>
Noji, Hiroyuki	S16-7, 25P-192, 26P-062, 26P-091, 26P-104, 26P-158, 26P-237, 26P-261, 27P-021, 27P-043, 27P-081, 27P-185, 28P-022, 28P-048, 28P-169, 28P-256, BP10-2	Nureki, Osamu	<b>S7-1</b> , 25P-022, 26P-006, 27P-001, 27P-014, 27P-025
Noji, Masahiro	<b>28P-050</b>	Nussinov, Ruth	25P-213
Nojima, Tatsuya	25P-060		
Nojiri, Ryoya	27P-002	<b>O</b>	
Nomoto, Akira	<b>27P-039</b> , 28P-038	O'Flynn, Katie Blaze	<b>25P-219</b>
Nomura, Kayoko	27P-266	Oasa, Sho	<b>25P-254</b>
Nomura, Shin-ichiro	*HT-D	Obayashi, Kohei	25P-211
Nomura, Shin-ichiro M.	28P-074	Oda, Akifumi	25P-198
Nomura, Shin-ichiro M.	25P-087	Oda, Arisa	25P-280, 27P-231
Nomura, Takashi	27P-269	Oda, Masayuki	<b>25P-030</b>
Nomura, Takeshi	<b>27P-267</b> , 28P-265	Oda, Nanase	<b>27P-188</b>
Nonaga, Shunta	<b>25P-230</b>	Oda, Toshiro	S12-1
		Oeba, Duke	26P-217
		Ogai, Shigeki	27P-023
		Ogasawara, Koki	25P-076

Ogasawara, Satoshi	25P-004, 26P-003	Ohta, Sumie	27P-108
Ogata, Hideaki	<b>27P-011</b>	Ohtake, Yoshiyuk	26P-108
Ogawa, Haruo	25P-073	Ohtaki, Masako	26P-266
Ogawa, Hinano	25P-174	Ohuchi, Hideyo	28P-146
Ogawa, Naoki	28P-199	Ohue, Masahito	26P-210
Ogawa, Rina	27P-056	Ohue-Kitano, Ryuji	25P-072
Ogawa, Tetsuhiro	25P-083	Oide, Mao	<b>S10-3</b> , 25P-016, 25P-102, 27P-096
Ogi, Hirotsugu	25P-267, 26P-064	Oikawa, Hiroyuki	26P-054
Ogihara, Satoshi	S11-3, <b>27P-092</b>	Oiki, Shigetoshi	28P-126
Ogita, Goshi	HT-E-2	Oishi, Takumi	27P-092
Oguni, Nobutoyo	*BP5	Oiwa, Kazuhiro	YF-1, <b>25P-127</b> , 25P-128, 26P-105, 27P-101, 27P-186, 28P-110
Ogura, Fumika	27P-107	Okabe, Kohki	26P-243, 27P-132, 27P-243, 27P-265, 28P-244, <b>28P-268</b> , <b>BP3-1</b>
Ogura, Naoki	<b>26P-119</b>	Okada, Masahiro	<b>26P-270</b>
Ogura, Toshihiko	25P-282	Okada, Naobumi	26P-133
Oh, Seung Soo	<b>S32-4</b>	Okada, Yasushi	25P-017, 25P-154, 25P-222, 26P-061, 27P-246, 28P-085, 28P-118, <b>SS-2-1</b> , <b>BP11-1</b>
Oh-oka, Hirozo	26P-174	Okahata, Misaki	25P-043, <b>25P-166</b> , 27P-045
Ohashi, Sayaka	26P-021, 27P-166, <b>27P-167</b>	Okajima, Takaharu	28P-259
Ohgita, Takashi	25P-037, <b>25P-042</b>	Okamoto, Kenji	S8-5, <b>25P-116</b>
Ohhashi, Yumiko	27P-006	Okamoto, Mayumi	<b>HT-E-6</b>
Ohki, Yuya	25P-025	Okamoto, Yasunori	27P-156
Ohkubo, Tatsunari	<b>28P-063</b>	Okamoto, Yusuke	26P-042, 28P-003
Ohmachi, Masashi	25P-101	Okamura, Nobuyuki	26P-009
Ohmizu, Takashi	<b>27P-043</b>	Okamura, Yasushi	25P-150
Ohmuro-Matsuyama, Yuki	<b>26P-046</b> , 27P-061	Okano, Hideyuki	27P-268
Ohnishi, Yusuke	28P-191	Okayama, Ayumi	27P-147
Ohno, Hirohisa	28P-074	Okazaki, Kei-ichi	26P-208, 27P-209, 28P-091
Ohno, Marina	HT-B-6	Oketani, Ryosuke	27P-245
Ohno, Satoshi	26P-216	Oki, Masaya	26P-189
Ohnuki, Jun	<b>26P-208</b>	Okimura, Chika	<b>25P-122</b> , 25P-123, 25P-124
Ohnuma, Kiyoshi	25P-126, <b>26P-266</b>	Okita, Hirotaka	<b>27P-251</b>
Ohshima, Ayano	27P-155	Okochi, Yoshifumi	25P-150
Ohshima, Hiromu	28P-057		
Ohta, Akane	25P-043, 25P-166, 27P-045		
Ohta, Kunihiro	25P-280, 27P-231		
Ohta, Masateru	28P-222		

# Chairs and Speakers Index

Oku, Hirosuke	27P-023	Onuchic, José	<b>S21-1</b>
Okuda, Kazuhide Shaun	26P-153	Ooka, Koji	<b>YF-9, 28P-037</b>
Okuda, Mitsuhiro	<b>28P-260</b>	Oosawa, Chikoo	26P-135
Okuda, Satoru	*S2, 26P-259	Oraziotti, Alexander	28P-186
Okuda, Sota	<b>27P-187</b>	Orekhov, Philipp S.	27P-226
Okumura, Hisashi	<b>25P-215, 26P-215,</b> 27P-211, 28P-058	Ormaetxea Guisasola, Julene	28P-068
Okumura, Masaki	27P-151	Ornos, Irune	28P-068
Okuni, Yasuko	S16-6	Oroguchi, Tomotaka	<b>26P-226</b>
Okuno, Takashi	25P-148	Ortiz, María	<b>26P-113</b>
Okuyama, Akari	28P-149	Osanai, Riu	<b>26P-128</b>
Okuyama, Kohei	<b>27P-234</b>	Osari, Suguru	<b>BP3-1</b>
Oldenbourg, Rudolf	26P-133	Oshima, Hiraku	HT-C-4, 25P-226
Olinares, Paul Dominic	25P-081	Oshima, Minori	27P-165
Oliveira, Maria	25P-283	Oshima, Yasuhiro	27P-258
Olivucci, Massimo	<b>AP</b>	Oshiro, Takumi	<b>26P-013</b>
Olsson, Ulf	25P-184	Ota, Masateru	28P-183
Oluwole, Abraham O	25P-071	Ota, Sadao	S31-5, 25P-258
Oma, Yukako	26P-248	Ota, Tomoki	<b>26P-064</b>
Omae, Kimiho	25P-012, 25P-014	Otaki, Misako	26P-120
Omae, Ryoma	25P-158	Otawa, Masaki	<b>26P-215</b>
Ombiro, Jared	26P-217	Otis, François	28P-272
Omichi, Masaaki	27P-258	Otomo, Akihiro	<b>S16-6, 25P-115, 27P-071,</b> 27P-084, 27P-106, 27P-127
Omori, Fuga	<b>25P-161</b>	Otomo, Masafumi	25P-173
Omura, Risa	26P-250	Otori, Yuya	<b>25P-073</b>
Onami, Shuichi	*S33, <b>S33-1, *HT-A, HT-A-5,</b> 25P-095, 27P-252	Otsu-Hyodo, Tomoko	26P-108
Onishi, Itaru	27P-034, 28P-019	Otsubo, Shiho	28P-054
Ono, Junichi	26P-015	Otsuka, Shotaro	<b>S4-2</b>
Ono, Kenjiro	26P-066	Otting, Gottfried	27P-032
Ono, Shunsuke	27P-238	Ounjai, Puey	26P-209
Ono, Takao	<b>25P-241</b>	Owyong, Tze Cin	25P-068, 26P-153
Onoda, Hiroki	25P-193, 27P-054, 27P-260	Oya, Yutaka	28P-270
Onodera, Wataru	27P-063	Oyama, Kotaro	YF-8, 25P-100, 25P-119, <b>27P-258</b>
Onoe, Hiroaki	26P-087	Oyama, Ryo	26P-022



Oyama, Takuji	25P-030	Paul, Anirban	<b>27P-149</b>
Oyama, Tomoko	25P-119	Pauling, Clint	28P-032
Oyama, Tomoko G	27P-258	Paulo, António	25P-283
Ozawa, Shin-Ichiro	28P-026	Pavan, Mariela	26P-068
Ozawa, Takeaki	25P-050, 27P-178, 28P-249	Pearce, Nicholas	26P-231
Ozawa, Tatsuhiko	27P-202, 28P-261	Pearson, Arwen R.	26P-260
Ozawa, Yosuke	S31-2	Pedaci, Francesco	S30-1
Önfelt, Björn	S9-2	Pelegrin, Pablo	27P-138
Österborg, Anders	S9-2	Pena, Maria T	27P-098
Öztürk, Yavuz	28P-014	Peng, Yu	<b>26P-247</b>
		Penka, Elke	25P-002
<b>P</b>		Peplowski, Lukasz	<b>25P-209</b>
		Perahia, David	25P-213
Padinhateeri, Ranjith	26P-093	Pereira Schmidt, Anneka C.	25P-147
Padula, Matt	25P-142	Perez Lopez, Ignacio	26P-092
Paik, Su-Jin	S29-4	Perez, Alberto	<b>28P-217</b>
Pal, Anusuya	<b>25P-256</b>	Persson, Louise	25P-071
Palomba, Francesco	S1-5	Pesanelli, Jennifer	BPS
Palur, Raghuvamsi	25P-224	Petrlova, Jitka	S19-2
Pan, Xu	<b>26P-055</b>	Petrov, Anton S	S32-1
Pang, Lin	28P-124	Petruk, Ganna	S19-2
Pantelopulos, George Anthony	<b>28P-196</b>	Pfeffermann, Juergen	28P-130
Panyella Pedersen, Bjørn	27P-194	Phironrit, Namthip	25P-252
Pappas, Charalampos	25P-113	Phougat, Monika	<b>26P-198</b>
Paquet-Côté, Pierre-Alexandre	28P-272	Phung, Quan Manh	25P-222
Paramonov, Alexander	28P-064	Picard, Louis-Philippe	28P-186
Park, Chanho	28P-226	Pimpão, Catarina	26P-076, <b>27P-137</b>
Park, Sun-Yong	28P-199	Pipatpolkai, Tanadet	<b>26P-196</b> , 26P-209
Park, Tae Lim	<b>S8-4</b>	Pires, Ines Domingos Silva	<b>26P-025</b>
Park, Yeongkyoung	28P-098	Poddar, Harshwardhan	26P-016
Parkin, Dan	26P-015	Pohl, Ehmke	<b>28P-020</b> , 28P-044
Parui, Aasna	S7-6	Pohl, Elena E	<b>26P-079</b>
Patkunarajah, Amrutha	S6-1	Pohl, Elena E.	27P-070
Paton, Julian	25P-281	Pohl, Peter	26P-190, 28P-014, 28P-017, <b>28P-130</b>
Patteson, Alison	S12-4		

# Chairs and Speakers Index

Poitevin, Frederic P.	27P-198	Qianzhu, Haocheng	27P-032
Pol, Mahesh	25P-113	Qiu, Zhirou	25P-065
Poladyan, Anna	25P-047	QP Uyeda, Taro	27P-103
Polizzi, Karen	<b>S20-3</b>	Quesñay, José Edwin	27P-007
Pongprayoon, Prapasiri	<b>26P-029</b>	Quinn, Ada	25P-023
Poole, Kate	*S6, <b>S6-1</b>		
Poranen, Minna M.	S19-6		
Posch, Sandra	26P-044, 28P-014, 28P-039	<b>R</b>	
Postnikov, Eugene	25P-163, 25P-237, 26P-234	R., Adarshkrishnan	26P-093
Postnikov, Eugene B	<b>26P-162</b>	Radford, Sheena	28P-035
Postnov, Dmitry	26P-162	Rafelski, Susanne	*S14, <b>S14-1</b>
Pozdnyakov, Egor M.	27P-226	Raghuvamsi, Palur	S19-2, 25P-266
Preiner, Johannes	25P-029	Rahaman, Hamidur	<b>28P-018</b>
Prema, Raja	27P-048	Rahasri, Rifqa Fikriya	<b>27P-203</b>
Pretre, Gabriela	28P-260	Rahsid, Mst Rubaya	<b>27P-109</b>
Prieto, Manuel	*AP, *YIA, <b>25P-079</b>	Rajaei, Vahab	S32-1
Prince, Stephen	25P-205	Rajfur, Zenon	25P-118
Project Team, Auto Culture	S31-2	Rakshit, Dr. Sabyasachi	25P-117
Proskurkin, Ivan	25P-163	Rakshit, Sabyasachi	26P-114, 27P-112, 27P-148
Prosser, R. Scott	28P-186	Ramberg, Kiefer	25P-261
Pu, Qian	28P-155	Ramchandra, Rohit	25P-281
Pujicic, Andrijana	<b>28P-175</b>	Ramos Souza Barbosa, Leandro	27P-158
Purba, Endang R.	26P-175, 26P-176	Ramu, Avinash	S24-3
Pusch, Michael	<b>25P-272</b>	Ramírez Rosales, Daniel	27P-053
Pushpa, Kakchingtabam	28P-018	Rao, Yashas	27P-198
Puthia, Manoj	S19-2	Raskatov, Jevgenji	S25-3
Putz, Tobias	26P-043	Raston, Colin	25P-261
Pérez-Gil, Jesús	25P-079	Re, Suyong	25P-226, <b>26P-211</b>
Pérez-Jover, Isabel	28P-068	Redding, Kevin E	26P-174
		Regmi, Raju	S29-4
<b>Q</b>		Reinhardt, Aleks	25P-203
		Reinhardt, Susanne	S1-3
Qi, Zhi	<b>S28-4</b>	Reiniger-Chatzigian, Ian	25P-001
Qian, Cheng	<b>25P-056</b> , 25P-065	Ren, Weitong	S10-3, 25P-020

Rendrawan, Dedy	26P-203, 26P-205, <b>26P-221</b>	Rungrotmongkol, Thanyada	25P-120
Rhee, Young Min	<b>S21-4</b>	Ruohola-Baker, Hannele	<b>KL-4</b>
Rheinlaender, Johannes	S6-6	Rupreo, Vibeizonuo	<b>25P-021</b>
Rheinstädter, Maikel	27P-184	Russell, Robert A.	25P-147
Rhys, Guto	*S17, <b>S17-3</b>	Rutkowski, David	25P-268
Rianna, Carmela	25P-249	Ryan, Renae	25P-023
Richter, Walter	28P-127	Ryu, Je-Kyung	*S11, <b>S11-5</b>
Ridone, Pietro	S30-6		
Riegerová, Petra	25P-144	<b>S</b>	
Riepl, Daniel	28P-024		
Rigler, Rudolf	25P-254	Sachl, Radek	26P-110
Rikuto, Tanaka	<b>25P-243</b>	Sada, Kazuki	28P-223
Rinaldin, Melissa	<b>S2-4</b>	Sader, Kasim	28P-155
Rindfleisch, Sören	25P-002	Sadhu, Raj-Kumar	S29-4
Riopedre-Fernández, Miguel	25P-201	Sae-Ueng, Udom	<b>25P-252</b>
Rios Santacruz, Ronald	<b>26P-016</b>	Saga, Yoshitaka	<b>27P-176</b>
Robertson, Adelaide	S32-1	Saga, Yumiko	28P-261
Robins, James A.	27P-091	Sagara, Masaya	<b>26P-132</b>
Robins, James Aaron	<b>26P-090</b>	Saha, Pritam	<b>25P-117</b> , 26P-114, 27P-112
Robinson, Carol V	25P-071	Saha, Ria	25P-021
Robinson, Robert	27P-134	Saha, Shirsha	27P-025
Rocklin, Gabriel	SS-2-4	Saiki, Seiichi	27P-251
Roder, Heinrich	26P-038	Saikusa, Kazumi	28P-181
Rodnenkov, Oleg	25P-270	Saini, Mohit. K.	26P-176
Rodriguez, Johanna	25P-249	Saio, Tomohide	26P-258, 27P-002, 27P-032
Roitberg, Adrian E.	27P-216	Saito, Hiroaki	26P-142
Rondelez, Yannick	26P-062, 28P-048	Saito, Hirohide	28P-074
Rosal, Karen G.	26P-264	Saito, Hiroyuki	25P-037, 25P-042
Rosta, Edina	27P-219	Saito, Katsuya	<b>27P-100</b>
Roujeinikova, Anna	<b>S22-5</b>	Saito, Kei	S26-3
Rousseau, Frederic	S25-2	Saito, Keisuke	25P-041, <b>25P-098</b>
Royant, Antoine	26P-168	Saito, Kenta	S1-2
Rozenberg, Andrey	25P-172, 26P-170	Saito, Kohei	28P-237, <b>28P-238</b>
Rudd-Schmidt, Jesse	26P-153	Saito, Masaki	25P-009
Ruggeri, Simone	28P-030	Saito, Nen	26P-222

# Chairs and Speakers Index

Saito, Ryuta	27P-160	Sakuragi, Shigeo	27P-161, 28P-138, <b>28P-139</b>
Saito, Suzuka	<b>28P-262</b>	Sakurai, Tatsunari	25P-122
Saito, Takuya	27P-093, 27P-159	Sakurai, Yoshinori	27P-181
Saito, Tetsuichiro	26P-003	Sakuta, Hiroki	<b>YF-1, 27P-186</b> , 28P-132
Saito, Yoko	28P-074	Salari, Hossein	S29-2
Saito, Yutaka	S17-6	Salazar, Michelle	27P-007
Saitou, Suzuka	27P-196	Salmon, Benjamin	25P-258
Sakai, Kazumi	<b>26P-171</b>	Saloni, Sharma	27P-025
Sakai, Keisuke	<b>27P-177</b>	Samsudin, Firdaus	S19-2
Sakai, Makoto	26P-240, 26P-241, 28P-236	Samsudin, Mohd Firdaus	<b>25P-266</b>
Sakai, Motoshi	26P-126	Sanada, Yu	27P-181
Sakai, Ryuichi	26P-012	Sanderson, John	26P-194
Sakai, Yuji	S11-1, <b>25P-157</b>	Sandoz, Patrick A.	S9-2
Sakai, Yusuke	25P-046, <b>28P-079</b>	Sanislav, Oana	26P-153
Sakakibara, Hitoshi	<b>28P-110</b>	Sankararamakrishnan, Ramasubbu	27P-027
Sakamoto, Koji	28P-077	Sano, Fumiya K.	<b>27P-025</b>
Sakamoto, Ritsuki	28P-008	Sano, Junya	27P-132
Sakamoto, Ryota	HT-E-1	Sano, Taiga	<b>27P-157</b>
Sakamoto, Ryuta	<b>27P-046</b>	Sano, Yutaka	<b>26P-054</b>
Sakamoto, Shion	<b>25P-167</b>	Santander, Axel	27P-270
Sakamoto, Tatsuya	<b>26P-049</b>	Santos Palma, Amanda	<b>27P-158</b>
Sakamoto, Tomoki	28P-072	Santos, Fátima	25P-283
Sakanoue, Rin	26P-099	Santos, Nuno C.	<b>26P-269</b> , 27P-137
Sakata, Eri	25P-002	Santos-Pérez, Isaac	28P-068
Sakata, Yoshihiro	28P-139	Sarlet, Adrien	S26-5
Sakaue, Haruka	27P-044	Sarsour, Eman Ramadan	<b>25P-143</b>
Sakaue, Takahiro	25P-156, 27P-093, 27P-159	Sasai, Masaki	*S29, S29-3, 27P-164
Sako, Ayaka	<b>25P-009</b>	Sasajima, Yuya	26P-118, 27P-121
Sako, Yasushi	S8-5, 25P-111, 25P-116, <b>25P-139</b>	Sasaki, Daisuke	<b>27P-110</b> , 28P-095
Sako, Yohei	<b>28P-210</b>	Sasaki, Fuka	27P-155, 28P-134
Sakuma, Yuka	<b>26P-149</b>	Sasaki, Jiei	28P-261
Sakumura, Yuichi	25P-216, 26P-123	Sasaki, Kazuo	25P-104
Sakura, Kazuki	HT-E-3	Sasaki, Mirai	<b>27P-185</b>
Sakuraba, Shun	26P-207	Sasaki, Takuma	27P-166
		Sasaki, Yuji	25P-019, 27P-110, 28P-061,

	28P-095	Sato-Tomita, Ayana	28P-152
Sasaki, Yuji C.	26P-045, 28P-063	Satoru, Itoh	27P-211
Sasano, Sachia	27P-165	Sattari, Sulimon	25P-129
Sastre, Santiago	27P-270	Savko, Martin	26P-005
Sato, Akihiko	27P-262	Sawa, Hirofumi	27P-262
Sato, Akira	*BP2	Sawada, Shogo	28P-108
Sato, Ayaka	27P-207	Sawada, Yasuyuki	27P-267, <b>28P-265</b>
Sato, Chikara	27P-100	Sawai, Satoshi	25P-278, 26P-137
Sato, Daisuke	27P-048	Sawai, Takuya	26P-042, 28P-003
Sato, Hiroki	27P-034, <b>28P-019</b>	Sawatari, Hayate	26P-033
Sato, Hisako	27P-048	Saxton, Matthew	S4-3
Sato, Imari	<b>HT-A-4</b>	Schapiro, Igor	<b>S23-4</b>
Sato, Katsuhiko	26P-165, 28P-106	Schellenberg, Matthew	S13-5
Sato, Katsushige	25P-164, <b>25P-165</b>	Schiessel, Helmut	25P-092, 25P-153
Sato, Kazunobu	27P-082	Schikora, Hendrik	S7-4
Sato, Keidai	25P-184	Schiro, Giorgio	26P-016
Sato, Keisuke	S1-2	Schiøtt, Birgit	27P-194
Sato, Keita	28P-146	Schlatterer, Rebecca	<b>25P-112</b>
Sato, Kochi	<b>27P-096</b>	Schlichthaerle, Thomas	S1-3
Sato, Kosei	25P-127	Schmidt, Hannes	S18-5
Sato, Makoto	*HT-E, <b>HT-E-4</b>	Schmidtchen, Artur	S19-2
Sato, Mana	<b>26P-056</b>	Schroeter, Lioba	S6-1
Sato, Sinobu	27P-135	Schromm, Andra B	<b>28P-127</b>
Sato, Suguru	26P-103	Schuergers, Nils	S22-1
Sato, Sumpei	28P-165	Schultze, Steffen	HT-C-1
Sato, Takashi	26P-259	Schulz, Eike	S7-4
Sato, Takehiro	26P-042, 28P-003	Schymkowitz, Joost	<b>S25-2</b>
Sato, Takeshi	25P-037	Schäffer, Tilman E.	S6-6, S18-5, 25P-249
Sato, Takuya	<b>27P-217</b>	Scipioni, Lorenzo	S1-5
Sato, Tatsuo	26P-259	Scrutton, Nigel	26P-016
Sato, Tokushi	28P-011	Seduk, Farida	S30-1
Sato, Yuki	27P-252	Seeger, Markus	25P-250
Sato, Yusei	<b>26P-103</b>	Segawa, Hayate	<b>26P-123</b>
Sato, Yusuke	26P-088, 26P-138, 26P-270, 27P-086, 27P-089	Seifert, Jan	S6-6, 25P-249
		Seiriki, Kaoru	27P-252

# Chairs and Speakers Index

Seki, Soichiro	27P-172, 28P-154, <b>28P-155</b>	25P-014, 26P-010
Sekigawa, Akio	*BP1	Shen, Jian-Ren YF-2, 25P-176, 26P-007
Sekiguchi, Hiroshi	27P-110, 28P-043, 28P-061, 28P-063	Shen, Ye 27P-174
Sekine, Shun-ichi	*S13, <b>S13-1</b> , S13-5, 28P-027	Shen, Yi <b>S28-5</b>
Sekine, Takumi	<b>28P-007</b>	Sheng, Danqi 25P-003, <b>25P-005</b> , 25P-006, 25P-012, 26P-010
Sekiya, Yuta	<b>27P-145</b>	Shenkarev, Zakhar <b>28P-064</b>
Sekiyama, Naotaka	25P-066, 28P-045	Shi, Liangquan <b>26P-032</b>
Sekizawa, Yoshitaka	*BP9	Shi, Qiang 26P-005
Seko, Noriaki	27P-258	Shi, Xianke <b>BP2-1</b>
Selmer, Maria	<b>S7-5</b>	Shiba, Kohei *BP7, *BP12, <b>BP12-1</b>
Semwal, Vivek	<b>27P-218</b>	Shibagaki, Mitsuki 26P-018, <b>27P-037</b>
Senda, Toshiya	S16-7, 25P-004, 26P-003	Shibai, Astushi 28P-165
Senju, Yosuke	<b>28P-123</b>	Shibata, Atsushi 25P-244
Sens, Pierre	S29-4	Shibata, Koki 27P-086
Sentoku, Mitsuru	<b>25P-125</b>	Shibata, Mikihiro <b>HT-B-5</b> , 25P-162, 26P-159, 26P-250
Seok, Chaok	<b>S10-2</b>	Shibata, Norio 28P-016
Seoyoung Kim, Jennifer	S32-1	Shibata, Tatsuo YF-7, *HT-E, HT-E-2, 27P-218, 28P-215, 28P-230
Sequeira, João G. N.	<b>27P-216</b>	Shibata, Yutaka 27P-174, <b>28P-158</b>
Seto, Ryoka	28P-152	Shibayama, Izumi <b>27P-236</b>
Seto, Ryuta	26P-175	Shibukawa, Natsuki 25P-056
Setou, Mitsutoshi	25P-247	Shibuya, Hayato HT-B-6
Sezgin, Erdinc	S9-2	Shibuya, Ren <b>25P-154</b> , 25P-228
Shabalkina, Alexandra	27P-074	Shichino, Yuichi <b>S8-3</b>
Shafei, Alaleh	27P-198	Shigefuji, Yuto 27P-108
Shah, Dhara D.	<b>28P-032</b>	Shigematsu, Hideki 25P-010, 26P-028, 27P-067, 28P-067
Shah, Pramod	S26-4	Shigeno, Mamoru 25P-035
Shajan, Maria	26P-272, 27P-271	Shigeta, Yasuteru 25P-120, 27P-073, 27P-207
Shanks, Julia	25P-281	Shigeyama, Wataru BP1-2
Shao, Miaoqing	25P-003	Shihoya, Wataru 25P-022, 27P-025
Sharifun, Shahnaj	28P-018	Shiimura, Yuki 27P-077, <b>28P-029</b>
Sharipov, Rinat	28P-131	Shikakura, Takafumi <b>27P-170</b>
Shemy, Ahmed	<b>25P-221</b>	
Shen, Cheng	<b>25P-003</b> , 25P-011, 25P-012,	

Shim, Hwanyong	<b>26P-251</b>	Shinobu, Ai	<b>25P-226</b>
Shima, Tomohiro	26P-017, <b>28P-117</b> , 28P-118, 28P-242	Shinoda, Toshiyuki	27P-174
Shimabukuro, Katsuya	25P-108, <b>28P-088</b>	Shinohara, Akira	25P-082
Shimada, Hiroyuki	28P-244	Shintaku, Hirofumi	YF-3, S6-5, 25P-239
Shimada, Yuichiro	27P-175	Shintani, Seine A.	<b>25P-236</b>
Shimada, Yuto	<b>27P-117</b>	Shintani, Yasunori	28P-028
Shimakawa, Ginga	26P-027	Shinya, Kosaki	<b>25P-175</b>
Shimamori, Keiya	26P-033	Shinzawa-Ittoh, Kyoko	25P-069, <b>26P-069</b>
Shimamoto, Yuta	<b>S12-2</b> , 26P-099	Shioi, Go	28P-247
Shimamura, Hisashi	<b>25P-156</b>	Shiomi, Akifumi	<b>25P-239</b>
Shimamura, Ryotaro	<b>26P-177</b>	Shiomi, Shunsuke	25P-188
Shimamura, Sota	<b>26P-222</b>	Shionyu, Masafumi	<b>26P-229</b>
Shimamura, Tsukasa	HT-E-6	Shiraishi, Shaya	<b>27P-093</b>
Shimane, Yasuhiro	S20-2	Shiraiwa, Hiromasa	<b>25P-188</b>
Shimanouchi, Toshinori	25P-037	Shiraki, Kentaro	25P-038, 26P-152, 27P-038, 27P-039, 28P-038
Shimazaki, Yukiho	26P-243, 27P-251, <b>27P-265</b>	Shiramasa, Yutaro	27P-155, 28P-134
Shimazoe, Masa A.	S11-1	Shirasaki, Yoshitaka	28P-250, <b>28P-251</b>
Shimi, T.	26P-252	Shiro, Ayumi	26P-180
Shimi, Takeshi	25P-240	Shiro, Yoshitsugu	27P-076
Shimizu, Kazuma	<b>25P-124</b>	Shiroguchi, Katsuyuki	*S14, <b>S14-5</b> , <b>BP6-1</b>
Shimizu, Kotaro	<b>26P-147</b>	Shirokawa, Tetsuya	25P-245
Shimizu, Masahiro	28P-008	Shirouzu, Mikako	*S7, S8-5, 27P-269, 28P-027
Shimizu, Nobutaka	27P-014, 28P-043	Shivakumar, Tejasvi	S20-3
Shimizu, Rei	<b>26P-235</b>	Shivgan, Aishwary	25P-266
Shimizu, Yoshihiro	26P-223, 28P-074	Shnyrova, Anna	<b>28P-068</b>
Shimobayashi, Shunsuke	*SS-2, <b>SS-2-5</b>	Shojaei, Sahar	<b>26P-043</b> , 26P-044, 28P-039
Shimogochi, Shota	<b>26P-228</b>	Shoji, Kan	<b>HT-B-4</b> , HT-D-6
Shimono, Kazumi	<b>28P-062</b>	Shoji, Takada	25P-080
Shimooka, Wataru	25P-177	Shono, Mayu	<b>26P-187</b>
Shin, Da Young	27P-140	Shree, Subha	27P-148
Shin, Woong-Hee	<b>28P-213</b>	Shribak, Michael	26P-133
Shinagawa, Ayumi	25P-241	Shrivastava, Abhishek	<b>S30-5</b> , 28P-032
Shinkai, Soya	<b>25P-095</b>	Shukla, Arun	27P-025

# Chairs and Speakers Index

Shulepko, Mikhail	28P-064	Soga, Shogo	<b>27P-005</b>
Shum, Anderson Ho Cheung	<b>S28-2</b>	Sohma, Yamamoto	<b>27P-015</b>
Shuyan, Wang	26P-150	Sokabe, Masahiro	27P-267, 28P-265
Siddique, Arslan	*S28, <b>S32-3</b>	Sokolov, Igor	26P-162
Sielaff, Hendrik	26P-116	Solano, Ashleigh	S1-4
Sierra, Raymond G.	27P-198	Someya, Ryuga	<b>28P-038</b>
Sikorski, Marcin	28P-011	Somiya, Masaharu	<b>S17-4</b>
Siligan, Christine	26P-043, 26P-044, 28P-014, <b>28P-017</b> , 28P-039	Song, Chen	<b>HT-C-2</b> , 28P-205
Silonov, Sergey	26P-098	Song, Chihong	27P-261
Singh Sahni, Narinder	26P-198	Song, Jinung	28P-213
Singh, Laishram Rajendrakumar	<b>28P-010</b>	Song, JinWoong	<b>27P-008</b>
Singh, Manish	26P-074	Sono, Hidekazu	28P-133
Singh, Ojas	25P-117	Sonoshita, Masahiro	27P-221, 27P-228
Singh, Vandana	25P-144	Sotoma, Shingo	26P-243, 26P-256, 27P-251
Singha Roy, Atanu	<b>25P-015</b>	Soveral, Graça	26P-076, 27P-137, 27P-138
Sittivanichai, Sirin	<b>27P-073</b>	Sowa, Yoshiyuki	S30-6
Sittivanitchai, Sirin	26P-029	Sowerby, Kate V.	28P-044
Sivak, David	<b>S16-3</b>	Spencer, Russell k w	<b>28P-219</b>
Sivak, David A.	28P-086	Sporbeck, Katharina	27P-144
Sivashanmugan, Kundan	25P-240	Spradley, Madeline E.	S20-4
Sizun, Christina	*PL-2, <b>S13-4</b>	Spriggs, Keith	26P-090
Sjöstrand, Dan	28P-024	Srinivasa Raghavan, Sriram	<b>25P-053</b>
Slatinskaya, Olga	25P-270	Stan, Diana Lavinia	28P-258
Slawek, Joanna	25P-007	Stansfeld, Phillip J	25P-071
Sljoka, Adnan	25P-026, 28P-186	Stasevich, Timothy	<b>S4-3</b>
Smirnov, Eugene	<b>26P-098</b>	Steen, Philipp	S1-3
Smith, Nicola	25P-023	Stepien, Piotr	28P-079
Smitha, Suraksha	26P-260	Steringer, Julia P.	25P-144
Sneppen, Kim	25P-234	Stević, Nađa	26P-043
So, Masatomo	<b>28P-035</b>	Stewart, Alastair	*S16, <b>S16-2</b> , 25P-001, 25P-023, 28P-022
Sobti, Meghna	25P-001, 25P-023, 27P-021, <b>28P-022</b>	Stewart, Alastair G.	27P-021
Soeda, Yoshiyuki	27P-161, 28P-139	Stoib, Anna	26P-043, <b>26P-044</b> , 28P-017, 28P-039
Soeta, Takahiro	28P-152	Strambio-De-Castillia, Caterina	*S33, <b>S33-2</b>



Strasser, Jürgen	<b>25P-029</b>	Sugiura, Mayui	28P-061
Strauss, Maximilian	S1-3	Sugiura, Yuya	25P-075, 28P-016
Strauss, Sebastian	S1-3	Sugiyama, Hironori	<b>26P-246</b>
Strisovsky, Kvido	25P-071	Sugiyama, Marie	<b>27P-095</b>
Stuart, David I.	S19-6	Sugiyama, Masaaki	26P-226, 28P-008, <b>28P-231</b>
Su'etsugu, Masayuki	25P-192		
Su, Haibin	<b>*ABA, ABA-3, 25P-225</b>	Sugiyama, Shinju	S8-5
Sudo, Yuki	25P-179, 27P-171, 28P-146	Sulong, Nor Akmalyati	<b>26P-202</b>
Suehiro, Tatsuya	28P-088	Sumii, Yuji	28P-016
Suen, Monica	S27-5	Sumikama, Takashi	25P-162, <b>28P-174</b>
Suetaka, Shunji	<b>28P-053</b>	Sumikawa, Taichi	28P-049
Suetake, Isao	27P-082	Sumino, Yutaka	YF-1, 27P-186
Suga, Kenta	<b>27P-107</b>	Sumiyoshi, Ai	28P-108
Suga, Michihiro	YF-2, 25P-176	Sumiyoshi, Rieko	<b>26P-102</b>
Sugai, Hiroka	28P-038	Sumura, Moe	27P-176
Sugase, Kenji	25P-186, 25P-187	Sun, Fei	<b>*S3, S3-1</b>
Sugawa, Mitsuhiro	27P-107	Sun, Hui	BP10-1
Sughiyama, Yuki	25P-232, 25P-233	Sun, Kailei	S30-2
Sugi, Takuma	26P-178, 27P-242	Sun, Linhao	28P-248
Sugihara, Kaori	26P-136, 26P-141, 27P-145	Sun, Liyang	S30-2
Sugimoto, Hikaru	27P-244	Sun, Xiaoyu	S19-6
Sugimoto, Hiroshi	27P-023, 27P-028, 27P-067, 27P-076, 28P-047	Sun, Yang	<b>25P-110</b>
		Sun, Yuze	<b>25P-057</b>
Sugimoto, Teppei	<b>27P-169</b>	Sunami, Tomoko	<b>26P-094</b>
Sugimoto, Yasunobu	28P-090	Sung, Ji Hye	27P-078
Sugimura, Kaoru	28P-084	Sung, Sihyun	S7-4
Sugishiata, Tomoaki	27P-082	Suno, Chiyo	27P-069
Sugita, Masatake	<b>26P-210</b>	Suno, Ryoji	25P-075, 27P-069, 28P-016
Sugita, Takashi	25P-187	Sunyong, Kim	S25-5
Sugita, Yuji	<b>*KL-2, YF-10, S10-3, S19-4, *HT-C, HT-C-4, 25P-102, 25P-157, 25P-159, 25P-196, 25P-197, 25P-208, 25P-214, 25P-226, 26P-263, 27P-210, 28P-204</b>	Sushida, Takamichi	HT-E-4
		Suto, Arisa	<b>26P-052</b>
Sugita, Yukihiko	25P-264, 27P-077, 28P-050	Suwa, Makiko	27P-100, 28P-178
Sugiura, Kazunori	27P-245	Suwa, Manami	28P-057
		Suzuki, Aya	<b>27P-021</b>
		Suzuki, Haruka	<b>26P-071</b>



Tajimi, Yuki	25P-031, 27P-127, 27P-129	Takao, Daisuke	28P-085
Takada, Kazunori	28P-237	Takaori-Kondo, Akifumi	S19-5
Takada, Naoya	26P-163	Takarada, Masaharu	28P-244, 28P-268
Takada, Sakura	<b>25P-235</b>	Takaramoto, Shunki	<b>25P-067</b> , 26P-166, 26P-170
Takada, Shoji	S11-3, *S21, <b>S21-5</b> , 25P-093, 25P-196, 26P-095, 26P-195, 27P-108, 27P-210, 27P-223, 28P-193	Takasato, Minoru	*S31, <b>S31-1</b>
Takada, Teppei	28P-001	Takashi, Murayama	28P-023
Takagi, Ayumu	<b>28P-153</b>	Takashima, Akihiko	27P-161, 28P-139
Takagi, Chiyo	27P-172	Takashima, Hikaru	27P-108
Takagi, Hiroaki	25P-101, 27P-140, <b>28P-224</b>	Takasu, Atsushi	26P-099
Takagi, Kanta	<b>25P-086</b>	Takata, Koji	27P-038
Takagi, Ken	<b>27P-190</b>	Takata, Maki	25P-151
Takagi, Masatoshi	S11-1	Takayama, Yoshiki	<b>27P-033</b>
Takagi, Naosato	<b>28P-220</b>	Takayama, Yuki	26P-248, 26P-249
Takahashi, Daichi	<b>YF-4</b> , <b>25P-131</b> , 26P-118, 27P-119, 27P-125	Takazaki, Hiroko	27P-022, 27P-024, <b>27P-051</b>
Takahashi, Hiroaki	25P-228	Takazawa, Momoka	<b>25P-059</b>
Takahashi, Hirona	26P-240, 26P-241, 28P-236	Takebayashi, Kazutoshi	<b>27P-143</b>
Takahashi, Koichi	S31-2	Takebe, Masumi	26P-179
Takahashi, Masayo	S31-2	Takebe, Takanori	<b>S31-4</b>
Takahashi, Nao	<b>25P-040</b>	Takeda, Gakuto	25P-158
Takahashi, Satoshi	<b>ABA-5</b> , 26P-054, 26P-060, 26P-262, 27P-064, 27P-264, *BP4	Takeda, Hironori	27P-044
Takahashi, Takuya	<b>25P-097</b> , 27P-196, 27P-208, 28P-180, 28P-262	Takeda, Kazusa	27P-015
Takahashi, Yuichiro	28P-026	Takeda, Masaki	27P-187
Takahashi, Yutaro S.	26P-034	Takeda, Michiko	27P-218
Takahiko, Chimura	HT-D-5	Takeda, Natsume	28P-088
Takai, Ryogo	26P-046	Takeda, Shuichi	S12-1, 27P-131, 27P-134
Takaishi, Ryu	<b>28P-113</b>	Takeda, Yotaro	<b>28P-195</b>
Takami, Ryosuke	27P-221, <b>27P-228</b>	Takeda-Sakazume, Asuka	<b>27P-165</b>
Takanashi, Kageyasu	*BP6	Takefumi, Yamashina	27P-109
Takano, Mitsunori	26P-015, 27P-040, 27P-104	Takegahara, Haruto	<b>27P-156</b>
Takano, Yu	26P-206, 28P-191	Takeharu, Nagai	25P-243
		Takehiko, Tosha	26P-016
		Takei, Miki	25P-125
		Takei, Toshiki	27P-082
		Takekawa, Norihiro	25P-031, 26P-126,

# Chairs and Speakers Index

27P-126, 27P-128, <b>27P-129</b> , 28P-054, 28P-137	Tamao, Kenji	<b>25P-192</b>
Takemori, Kenta	<b>26P-122</b>	25P-061
Takemura, Masaharu	27P-117	25P-009
Takenaka, Shigeori	27P-135	25P-246
Takenaka, Shinji	26P-175, 26P-176	25P-280
Takeshima, Hikari	26P-259	S11-1, S24-2
Takeshita, Daijiro	28P-267	<b>26P-120</b>
Takeshita, Kazutaka	28P-103	26P-259
Takeshita, Kohei	25P-151	Tan, Cheng
Taketoshi, Makiko	26P-164, 28P-142	<b>25P-159</b> , 25P-197, 25P-214, 27P-210
Takeuchi, Azusa	26P-034	Tan, Jiongyi
Takeuchi, Chihiro	25P-126	Tan, Minjia
Takeuchi, Haruto	<b>27P-126</b>	Tan, Shao Ying
Takeuchi, Ichiro	25P-180	Tanaami, Takeo
Takeuchi, Kazumasa	26P-265	<b>BP9-1</b>
Takeuchi, Miyu	25P-062	Tanabe, Aki
Taki, Masayasu	25P-222	25P-045
Takiguchi, Kingo	26P-145, 26P-148, 28P-132	Tanabe, Hatsuki
Takiguchi, Sotaro	26P-053	28P-026
Takiguchi, Yu	26P-108	Tanaka, Hideaki
Takinoue, Masahiro	HT-D-5, 25P-085, 25P-086, 25P-087, 25P-088, 25P-089, 26P-085, 26P-087, 26P-089, 27P-085, 28P-074	26P-004, 26P-027, 28P-026, 28P-191
Takishima, Ryota	<b>27P-192</b>	Tanaka, Hideaki Tanaka
Takui, Takeji	27P-082	28P-155
Takuya, Kobayashi	28P-023	Tanaka, Hideo
Talotta, Francesco	25P-028	26P-100
Tama, Florence	*S10, 25P-010, 25P-053, 25P-222, 26P-239, 27P-193	Tanaka, Hiroki
Tamagaki-Asahina, Hiroko	25P-037	27P-181
Tamagawa, Nao	26P-259	Tanaka, Ichiro
Tamai, Shingo	<b>27P-269</b>	27P-050
Tamai, Sho	25P-127	Tanaka, Julia
Tamaki, Junko	<b>BP15-1</b>	26P-149
Tamakoshi, Masatada	26P-121	Tanaka, Keisuke
		28P-025
		Tanaka, Kohei
		27P-160
		Tanaka, Masahito
		<b>26P-099</b>
		Tanaka, Motomasa
		S8-5, *S25, <b>S25-1</b> , 27P-269, *MS3, <b>MS3-1</b>
		Tanaka, Nobukiyo
		27P-107
		Tanaka, Seiya
		<b>25P-193</b>
		Tanaka, Shigenori
		27P-205
		Tanaka, Shintaro
		*BP3
		Tanaka, Shinya
		27P-255
		Tanaka, Takumi
		25P-040
		Tanaka, Tatsuki
		25P-022

Tanaka, Yoshikazu	25P-062, 26P-009, 26P-012, 26P-013, 26P-050, 26P-088, 27P-056	Tebaldi, Toma	S25-8
Tanaka, Yoshiki	25P-222, 26P-034, <b>27P-124</b>	Tedeschi, Giulia	S1-5
Tanaka, Yoshiko	28P-087	Tee, Wei-Ven	27P-224
Tanaka, Yumiko	28P-251	Tefera, Dessalegn	27P-037
Taneda, Akito	<b>28P-206</b>	Tellkamp, Friedjof	S7-4
Taneja, Charu	27P-148	Temma, Kenta	<b>27P-245</b>
Tang, Jingyi	26P-049	Teng, Xinyu	25P-003, <b>25P-006</b> , 25P-011, 25P-012
Tang, Lei-Han	26P-156, <b>27P-235</b>	Tenno, Takeshi	26P-040, 28P-263
Tang, Qian-Yuan	<b>25P-034</b> , 26P-001, 26P-002	Terada, Sumio	S1-2
Tang, Qianyuan	25P-020	Terada, Tohru	25P-018, 26P-199
Tani, Hideki	28P-261	Terai, Takuya	27P-240, 27P-244
Tani, Kazutoshi	26P-175, 26P-176	Terakawa, Tsuyoshi	S13-2, *S27, <b>S27-1</b> , 25P-093
Tani, Marie	27P-109	Terakita, Akihisa	<b>S23-5</b> , 27P-168
Tani, Shinsuke	25P-241	Teramae, Jun-nosuke	S18-6
Tani, Tomomi	<b>S1-2</b> , 26P-133, 28P-141	Teramura, Ryuga	<b>27P-012</b>
Tani, Yuki	25P-173	Teranishi, Aki	26P-259
Taniguchi, Rin	<b>27P-174</b> , 28P-158	Terasaka, Naohiro	25P-046, 26P-059
Tanimoto, Hirokazu	25P-276	Terauchi, Kazuki	25P-178
Tanimoto, Yasushi	<b>27P-150</b>	Terauchi, Yuki	25P-040
Tanioka, Yuki	28P-146	Terayama, Kei	28P-199
Tanna, Yeshurun Amarasingham	<b>26P-194</b>	Terenius, Lars	25P-254
Tanner, John Douglas	<b>27P-003</b>	Teshirogi, Yosuke	<b>26P-199</b>
Tanoi, Keitaro	25P-011	Tetley, Rob	25P-099
Tany, Ryosuke	28P-029	Tetty-Matey, Abraham	25P-272
Tanzawa, Takehito	25P-083	Tezuka, Moe	<b>27P-045</b>
Tao, Elaine	27P-220	Theodoropoulou, Anastasia	<b>25P-028</b>
Taoka, Azuma	28P-101	Theriot, Julie A	S14-1
Tape, Chris	26P-267	Thiel, Vera	26P-176
Tarassov, Sanzhar	27P-020	Thijssen, Kristian	S26-5
Targosz-Korecka, Marta	25P-271	Thilakarathne, Narasinghe Mudiyansele	
Tateno, Takumi	28P-028	Hansaka Nirupama	<b>25P-008</b>
Tatsumi, Rie	<b>25P-064</b>	Tian, Fujia	26P-081
Tayama, Tomotaka	25P-260	Tikhonov, Mikhail	*S5, <b>S5-1</b>
Taylor, Nicholas M. I.	<b>S30-3</b>		

# Chairs and Speakers Index

Tinguely, Jean-Claude	<b>26P-254</b>	Tomono, Junta	26P-009
Tittmann, Kai	25P-002	Tomonori, Hasebe	26P-188
Tiwari, Suman	<b>25P-049</b>	Tono, Kensuke	26P-016
Tkano, Shin	27P-113	Tooze, Sharon A	25P-160
Tochio, Hidehito	25P-066	Torigoe, Shogo	25P-191
Toda, Keiichiro	<b>28P-244</b>	Torisawa, Takayuki	YF-1, <b>S26-3</b> , 27P-186
Todaka, Reiko	27P-261	Tosaka, Toshiyuki	26P-071, <b>26P-072</b>
Togashi, Yosuke	25P-179	Tosha, Takehiko	26P-028
Togashi, Yuichi	26P-227, 28P-208	Toshiko, Yamazawa	28P-023
Togawa, Wataru	28P-045	Toshimori, Kiyotaka	28P-085
Tohru, Minamino	25P-251	Toshino, Kenta	<b>27P-103</b>
Tokumasu, Fuyuki	28P-126	Toshio, Hidehito	28P-045
Tokunaga, Etsuko	27P-260	Toshioka, Fumi	26P-063
Tokunaga, Makio	28P-241	Tosun, Bilge	27P-198
Tokunaga, Yuki	<b>27P-057</b>	Totani, Masahiro	25P-282
Tokuoka, Rina	28P-267	Tottori, Takehiro	<b>25P-229</b>
Tokuraku, Kiyotaka	26P-033	Toviwek, Borvornwat	<b>25P-210</b>
Tokuyasu, Ayama	<b>28P-099</b>	Toyabe, Shoichi	26P-088, 26P-183, 27P-105, 28P-086
Tolun, Gökhan	25P-027	Toyoda, Atsushi	25P-043, 25P-166
Toma-Fukai, Sachiko	26P-042, 28P-003, 28P-148	Toyoda, Yu	28P-001
Tomabechi, Yuri	S8-5	Toyonaga, Takuma	26P-118, 27P-122, 27P-124, <b>28P-092</b>
Tomaz, Cândida Ascensão Teixeira	<b>25P-283</b>	Toyoshima, Atsushi	28P-060
Tominaga, Daichi	<b>27P-089</b>	Toyota, Taro	26P-266
Tominaga, Taiki	28P-090	Tozawa, Kentaro	S19-5
Tominaga, Takashi	<b>26P-164</b> , 28P-141, 28P-142	Tran, Duy	27P-017
Tominaga, Yoko	26P-164, <b>28P-141</b> , 28P-142	Tran, Duy Phuoc	26P-197, <b>28P-186</b>
Tomita, Masanori	<b>25P-181</b> , 26P-180	Tran, Trang Ngoc	<b>28P-006</b>
Tomita, Naoki	<b>27P-054</b>	Trchounian, Karen	<b>25P-047</b>
Tomita, Shunsuke	27P-039	Triantafyllidis, Dimitrios	<b>26P-260</b>
Tomizawa, Kazuhito	25P-187	Tripathy, Suvranta	27P-111
Tomo, Tatsuya	27P-174	Tripp, Lloyd	S24-3
Tomohara, Kanji	26P-237, <b>28P-169</b>	Tsai, Cheng-Yu	<b>28P-198</b>
Tomonaga, Keizo	25P-264	Tsai, Feng-Chiao	26P-264

Tsai, Ming-Daw	26P-168	Tsuruyama, Tatsuaki	28P-270
Tsai, Pi-Cheng	<b>26P-007</b>	Tsutsumi, Chika	27P-046
Tsigelny, Igor	25P-254	Tsutsumi, Kenta	<b>25P-013</b> , 28P-005
Tsubota, Hiroki	25P-035	Tsutsumi, Kenta	26P-069
Tsuboyama, Kotaro	<b>SS-2-4</b>	Tsuyama, Taichi	26P-077
Tsuboyama, Yosuke	28P-259	Tsuyama, Taiichi	27P-012
Tsuchida, Tatsuya	28P-152	Tsuyoshi, Terakawa	25P-080
Tsuchiya, Shoichi	26P-063	Tsuzuki, Taku	S31-2
Tsuda, Masumi	27P-255	Tubiana, Thibault	<b>28P-212</b>
Tsuda, Sakae	25P-019, 26P-045	Tuboi, Hazuki	25P-126
Tsuge, Hideaki	26P-053	Tulsian, Nikhil	25P-266
Tsuji, Akihiro	<b>26P-080</b> , 28P-025	Tulum, Isil	*S22, <b>S22-3</b>
Tsuji, Gakushi	<b>26P-189</b>	Turley, Jake	S2-1, <b>27P-099</b>
Tsuji, Sayaka	<b>27P-023</b>	Turoverov, Konstantin	26P-098
Tsuji, Tomoko	<b>28P-114</b>	Twardawa, Patrycja	25P-118
Tsujii, Toshiki	26P-142	Twardawa, Patrycja Lidia	<b>25P-271</b>
Tsujimoto, Hirokazu	28P-016	Tyschuk, Tatyana	26P-079
Tsujimura, Koya	27P-146		
Tsujimura, Masaki	<b>25P-041</b>		
Tsujiuchi, Yutaka	<b>28P-237</b> , 28P-238	<b>U</b>	
Tsukada, Hideaki	<b>26P-047</b>		
Tsukamoto, Hisao	25P-211	Uchida, Noriyuki	<b>27P-151</b>
Tsukamoto, Takashi	25P-025, 28P-145	Uchida, Tomoya	<b>27P-161</b>
Tsukazaki, Tomoya	26P-034	Uchida, Yumiko	28P-122
Tsukioka, Kotaro	27P-037	Uchihashi, Takayuki	25P-031, 26P-078, 26P-117, 26P-126, 27P-127, 27P-129, 28P-058, 28P-087, 28P-246
Tsukuda, Kyoka	<b>28P-142</b>	Uchikoga, Nobuyuki	<b>26P-193</b>
Tsumoto, Kanta	YF-1, 27P-186, 28P-132	Uchiyama, Susumu	S8-5
Tsumoto, Kohei	27P-057	Udono, Hirotake	<b>28P-074</b>
Tsumoto, Kouhei	25P-039, 25P-045, 25P-062, 26P-057, 27P-058, 28P-049	Ueda, Fuka	25P-109
Tsuneshige, Antonio	<b>27P-068</b>	Ueda, Hiroshi	25P-056, 25P-058, 25P-065, 25P-257
Tsunoda, Satoshi	25P-022, 25P-025, 26P-021, 26P-177, <b>28P-149</b> , 28P-161	Ueda, Masahiro	25P-121, 25P-138, 27P-115, 27P-139, 27P-140, 27P-143, 28P-120
Tsunoda, Tatsuhiko	27P-238	Ueda, Mitsuyoshi	25P-187
Tsuru, Saburo	<b>25P-185</b>		

# Chairs and Speakers Index

Ueda, Waka	27P-037	Ushioda, Suguru	<b>25P-223</b>
Ueda, Yuika	SS-1-3	Usui, Asako	27P-129
Uehara, Shuta	26P-013	Usuki, Gikyo	28P-223
Uejima, Tamami	28P-027	Usuki, Shin	26P-178, 27P-242
Ueki, Misuzu	28P-126, 28P-129	Utada, Andrew	26P-124
Ueki, Yuuji	27P-258	Uyeda, Taro	28P-114, 28P-267
Uemura, Kentaro	27P-262	Uyeda, Taro QP	<b>28P-093</b>
Uemura, Naoki	<b>26P-121</b> , 28P-088	Uzawa, Akiko	27P-181
Uemura, Sotaro	<b>S11-3</b> , 25P-260, 26P-238, 27P-092, 27P-238, 28P-235, 28P-251	<b>V</b>	
Ueno, Hiroshi	<b>S16-7</b> , 26P-104, 27P-021, 27P-043, 27P-081, 28P-022, BP10-2	V J, Usha Praveena	<b>25P-273</b>
Ueno, Shingo	<b>26P-063</b>	Vacle, Sarah	25P-028
Ueno, Taiji	<b>26P-091</b>	Vaillant, Cedric	S29-2
Uenoyama, Atsuko	27P-121	Vakili, Mohammed	28P-011
Uetsuka, Kohei	27P-187	Vallejos, Gabriel	27P-007
Ugarte, Diego	<b>25P-196</b>	van den Berg, Nathan	S26-5
Ujiiie, Kan	<b>25P-045</b>	van Dooren, Giel	25P-074
Ukaji, Yutaka	28P-152	Van Hear, Jimmy	<b>26P-267</b>
Ullah, Asad	26P-190	Van Lint, Johan	25P-221
Ulrich, Anne S.	28P-272	van Stokkum, Ivo H.M.	S23-2
Umeda, Ken-ichi	26P-066	van Wijland, Frédéric	26P-236
Umeda, Kenichi	<b>25P-052</b> , 26P-245, 26P-250, 27P-079, 27P-080	Vandenberg, Jamie	25P-023
Umehara, Senkei	<b>28P-227</b>	Vanderpoorten, Oliver	<b>26P-112</b>
Umeki, Nobuhisa	25P-139	Vanhoorelbeke, Karen	25P-061
Umena, Yasufumi	27P-260	Vanina, Anastasia S	<b>25P-163</b>
Umetani, Miki	S5-4	Vargas, Carolyn	27P-075
Umetsu, Mitsuo	27P-055	Vashisht, Vishavdeep	25P-117
Unno, Masashi	28P-152	Vasilieva, Ekaterina	27P-074
Unterauer, Eduard	S1-3	Vassilian, Anait	25P-047
Unzai, Satoru	S19-5	Vavylonis, Dimitrios	25P-268
Ushiba, Shota	25P-241	Vazdar, Mario	27P-070
Ushiki-Kaku, Yuko	28P-025	Vazquez, Alba Garcia	S26-5
Ushioda, Ryo	27P-046	Veatch, Sarah	<b>S9-3</b>
		Venkata Ramana, Sai	28P-102



Venkatesh, Varun	25P-279	Wada, Yuuko	27P-165
Venkatramani, Ravindra	26P-051	Waizumi, Tatsuyuki	<b>28P-132</b>
Verger, Alexis	S13-4	Wakabayashi, Katsuzo	28P-090
Veselsky, Artem	26P-234	Wakabayashi, Ken-ichi	25P-133
Victor, Bruno L.	26P-076	Wakabayashi, Taiki	<b>25P-016</b>
Viero, Gabriella	<b>S25-8</b>	Wakamoto, Yuichi	S5-4, 27P-231
Vigolo, Daniele	S28-5	Wakasugi-Masuho, Hideko	28P-029
Vilar, Marçal	27P-074	Wakatsuki, Soichi	27P-198
Villegas-Hernandéz, Luis Enrique	26P-254	Walczewska-Szewc, Katarzyna	<b>25P-077</b>
Vitelli, Vincenzo	<b>S14-2</b>	Walde, Peter	25P-190
Vitorino, João	<b>27P-201</b>	Wallis, Ciara J F	<b>25P-074</b>
Voet, Arnout	25P-061, 25P-221	Wan, Li	S19-5
Voet, Arnout RD	<b>25P-063</b>	Wang, Anna	S32-3, 25P-184
Voets, Lauren	25P-221	Wang, Ding	<b>26P-156</b>
Vogt, Andreas	28P-014	Wang, Haofeng	<b>27P-009</b>
Vojvodić, Sanja	<b>27P-070</b>	Wang, Jin	25P-003, 25P-006, 26P-010
von Eysmond, Hendrik	<b>S6-6</b>	Wang, Jiye	<b>28P-005</b>
von Loeffelholz, Ottilie	28P-034	Wang, Jufang	28P-163
von Pappenheim, Fabian Rabe	25P-002	Wang, Po-Hsun	26P-168
von Stetten, David	S7-4	Wang, Qisheng	<b>28P-012</b>
von Wintzingerode, Friedrich	28P-127	Wang, Ru-Chun	26P-010
Voskoboinik, Ilia	26P-153	Wang, Shen	<b>27P-018</b>
Voyer, Normand	<b>28P-272</b>	Wang, Tingting	<b>25P-010</b>
Vu, Cong Quang	<b>27P-253</b>	Wang, Wei	25P-020
Vu, Hongha	S13-5	Wang, Wei-Hsun	S4-4
Vu, Huong T	<b>26P-084</b>	Wang, Weiwei	26P-030
Vu, Huong T.	27P-091	Wang, Yi	<b>25P-206</b> , 27P-197
Vukojevic, Vladana	25P-254	Wang, Yu	26P-255
		Wang, Yu-Chiun	27P-218
		Wang, Yuzhu	25P-022
		Wang-Otomo, Zheng-Yu	26P-175, 26P-176
		Waraichi, Kasim	26P-129
		Warwicker, Jim	25P-205
		Washio, Takumi	25P-101
		Watabe, Tadashi	28P-060
<b>W</b>			
Wada, Hirofumi	26P-119, 28P-103		
Wada, Kohei	27P-147		
Wada, Naohisa	<b>25P-032</b>		
Wada, Yayoi	27P-221, 27P-228		

# Chairs and Speakers Index

Watanabe, Chiho	*S9, <b>S9-1</b> , *MS1, MS1-1	Winter, Lukas	28P-014
Watanabe, Daisuke	<b>28P-120</b>	Wiryasermkul, Pattama	28P-002, 28P-004
Watanabe, Hiroshi	26P-200	Wolff, Philippe	28P-034
Watanabe, Keiichi	27P-049	Wolkenstein, Felix	26P-044, 28P-039
Watanabe, Naoki	25P-268, 28P-240	Wolynes, Peter G.	25P-217
Watanabe, Naoko	26P-099	Wong, Richard W.	25P-246
Watanabe, Rikiya	S16-4	Wouters, Staf	<b>25P-061</b> , 25P-063
Watanabe, Satoshi	<b>27P-014</b>	Wren, Colin	<b>26P-005</b>
Watanabe, Shinji	<b>HT-B-3</b> , 27P-237, 28P-248	Wu, Chen-Chi	28P-198
Watanabe, Tomonobu	*S4, 28P-247	Wu, Chung-Chieh	25P-275
Watanabe, Yohei	25P-241	Wu, Chyuan-Chuan	27P-016
Watanabe-Nakayama, Takahiro	28P-095	Wu, Hong	28P-263
Watters, John	25P-081	Wu, Kuan-Ting	28P-243
Watts, Anthony	*AP, *YIA, <b>28P-144</b>	Wu, Kuen-Phon	25P-024, 27P-035, <b>27P-062</b>
Wazawa, Tetsuichi	28P-154	Wu, Qian	25P-222
Weber, Christoph	S26-6	Wu, Ti	<b>25P-238</b>
Wei, Chin-Dian	25P-082	Wu, Xuan	<b>27P-193</b>
Wei, Li	28P-163	Wu, Yawei	S24-3
Wei, Luo	27P-095	Wu, Yichao	<b>25P-195</b>
Weik, Martin	26P-016	Wu, Yufei	<b>26P-125</b>
Weissenbruch, Kai	28P-101	Wu, Zan	28P-124
Weitz, David	S28-5	Wuite, Gijs JL	<b>S11-2</b>
Welegedara, Adarshi	27P-032		
Wen, Fu-Lai	<b>HT-E-5</b>	<b>X</b>	
Wenzel, Christiane	<b>25P-113</b>		
White, Michael	S24-3	Xi, Yan	<b>25P-080</b>
Wiemann, Jared	27P-106	Xiaojie, Li	<b>26P-124</b>
Wiggan, O'Neil	S4-3	Xie, Liangxu	25P-034
Wijaya, Tegar Nurwahyu	<b>27P-195</b>	Xou, Yitong	S2-4
Wilde, Annegret	<b>S22-1</b>	Xu, Bin	25P-258
Wilkens, Stephan	<b>S16-5</b>	Xu, Chunyan	26P-030
Wilkinson, Martin	28P-035	Xu, Hexin	<b>25P-011</b>
Williams, Loren Dean	S32-1	Xu, Ke	<b>S15-2</b>
Wilson, Christian	26P-026	Xu, Lili	<b>25P-247</b>
Wilson, Mark	26P-194	Xu, Naining	S27-5

Xu, Tao	*BL, <b>S33-3, ABA-2</b>	Yamaguchi, Yuusuke	26P-189
		Yamahishi, Yuya	<b>26P-188</b>
<b>Y</b>		Yamaji, Misa	<b>26P-050</b> , 27P-056
		Yamakawa, Minori	<b>26P-240</b> , 26P-241
Yabu, Hiroshi	25P-040	Yamamoto, Daisuke	26P-173, <b>27P-250</b>
Yadav, Rohit	28P-130	Yamamoto, Eiji	26P-204, 28P-195, *SS-2, <b>SS-2-6</b>
Yagasaki, Rei	26P-259	Yamamoto, Junpei	26P-168
Yagi, Ken	28P-227	Yamamoto, Kei	<b>26P-131</b>
Yagi, Toshiki	<b>28P-108</b>	Yamamoto, Kohei	25P-150
Yagi-Utsumi, Maho	<b>28P-058</b>	Yamamoto, Kota	27P-042
Yaginuma, Hideyuki	25P-154	Yamamoto, Masahiro	<b>26P-070</b>
Yajima, Junichiro	25P-103, 26P-102, 26P-103	Yamamoto, Masaki	25P-010, 27P-067, 28P-043
Yakabe, Miho	27P-146	Yamamoto, Masamichi	28P-252
Yamada, Koyo	<b>26P-075</b>	Yamamoto, Mayuko	S16-6
Yamada, Risa	<b>26P-195</b>	Yamamoto, Natsuki	<b>27P-257</b>
Yamada, Ryusei	28P-006	Yamamoto, Norifumi	26P-192
Yamada, Takumi	25P-158, 26P-155	Yamamoto, Ryo	26P-074
Yamada, Yoichi	27P-038	Yamamoto, Ryu	28P-134
Yamagata, Atsushi	<b>S7-3</b> , 27P-269	Yamamoto, Shotaro	<b>25P-119</b>
Yamagishi, Ayana	<b>28P-266</b> , 28P-267	Yamamoto, Tetsuya	<b>25P-084</b> , <b>26P-200</b>
Yamagishi, Mai	28P-251	Yamanaka, Masahito	26P-100
Yamagishi, Masahiko	25P-103, 26P-102, 26P-103	Yamanaka, Masanori	<b>28P-167</b>
Yamaguchi, Eriko	26P-138	Yamane, Tsutomu	27P-212, <b>28P-183</b> , 28P-199
Yamaguchi, Hiroshi	S3-2, 26P-017, <b>27P-130</b>	Yamano, Yumiko	28P-154
Yamaguchi, Keiichi	26P-064, 27P-006	Yamaoki, Yudai	<b>28P-072</b>
Yamaguchi, Rui	27P-229, 28P-033	Yamasaki, Hiroto	<b>27P-090</b>
Yamaguchi, Ryuta	<b>25P-108</b>	Yamasaki, Takeru	26P-048
Yamaguchi, Satoshi	<b>27P-272</b>	Yamasaki, Yukihiko	25P-065
Yamaguchi, Shigehiro	25P-222	Yamase, Keidai	<b>28P-200</b>
Yamaguchi, Shimpei	S9-5	Yamashiro, Sawako	<b>25P-268</b> , 28P-240
Yamaguchi, Takumi	<b>27P-162</b> , 27P-239, 28P-184	Yamashita, Atsuko	26P-197
Yamaguchi, Tomoko	<b>S32-2</b> , 27P-036	Yamashita, Eiki	25P-013, 26P-069, 28P-005
Yamaguchi, Tomoyuki	<b>26P-233</b>	Yamashita, Hayato	26P-080, <b>28P-025</b>

# Chairs and Speakers Index

Yamashita, Hiroki	27P-107	Yang, Lee-Wei	<b>S26-4</b> , 28P-198
Yamashita, Jun K.	26P-253	Yang, Song	HT-C-2
Yamashita, Takahiro	25P-169, 26P-171, 28P-146	Yang, Xiaoyu	25P-011
Yamashita, Takefumi	<b>28P-197</b>	Yang, Yinghui	<b>25P-257</b>
Yamashita, Yukino	<b>26P-258</b>	Yang, Yue	25P-019, <b>26P-045</b>
Yamato, Takahisa	26P-037	Yang, Zhuohao	25P-083, 26P-247, <b>28P-250</b>
Yamauchi, Masataka	<b>25P-093</b>	Yano, Kotaku	<b>27P-024</b>
Yamauchi, Reiko	27P-013	Yao, Chao-Ling	S26-4
Yamazaki, Hirohito	S11-3, <b>27P-114</b>	Yapici, Ilkin	27P-198
Yamazaki, Ryohei	26P-163	Yassine, Sabek	26P-257
Yamazaki, Takeru	<b>27P-266</b>	Yastrebova, Ekaterina	<b>28P-269</b>
Yamazaki, Tomohiko	28P-267	Yasuda, Kenji	25P-125, 25P-136, 26P-163
Yamazaki, Tomohiro	25P-084	Yasuda, Kiyoto	S16-7, 26P-104
Yamazaki, Toshio	27P-072, 28P-150	Yasuda, Satoshi	25P-004, 26P-003
Yamazaki, Yoichi	26P-035, 26P-042, 28P-003, <b>28P-148</b>	Yasuda, Takanobu	25P-056, <b>25P-058</b> , 25P-065, 25P-257
Yamazaki, Yosuke	26P-131	Yasuda, Yoshiki	<b>27P-058</b>
Yamazawa, Toshiko	27P-266	Yasuhara, Kazuma	28P-125
Yan, Bin	S27-5	Yasumasa, Furuie	27P-179
Yan, Jie	*KL-3, 25P-057, 25P-114	Yasunaga, Takuo	26P-135, 27P-024, 28P-115
Yan, Qinglin	27P-225	Yasutake, Yoshiaki	25P-070
Yan, Shixin	<b>26P-111</b>	Yato, Akane	<b>27P-049</b>
Yan, Xiyun	<b>BL</b>	Yawo, Hiromu	26P-166
Yanagawa, Masataka	*S15, <b>S15-1</b> , 25P-111	Ye, Shen	28P-158
Yanagida, Toshio	25P-101	Ye, Songtao	28P-136
Yanagisawa, Katsuhiko	28P-058	Yeh, Ting-Kuang	<b>28P-143</b>
Yanagisawa, Keisuke	26P-210, <b>28P-189</b>	Yi, Po-Wei	YF-5, 26P-041
Yanagisawa, Miho	*S28, <b>S28-1</b> , 25P-155, 25P-256, 26P-137, 27P-087	Yi, Qing	S27-5
Yanagiya, Keita	28P-270	Yilmaz, Merve	27P-198
Yang, Bobae	26P-251	Yin, Xiaoyu	<b>26P-033</b>
Yang, Haitao	<b>28P-264</b>	Yoda, Toshiki	<b>25P-111</b>
Yang, Hongli	25P-250	Yokawa, Satoru	25P-135, <b>28P-245</b>
Yang, Jay-How	28P-011	Yokobayashi, Yohei	28P-075
		Yokoi, Shun	<b>27P-198</b>
		Yokosawa, Kohei	<b>26P-154</b>

Yokota, Hiroaki	<b>28P-070</b>	<b>28P-249</b>
Yokota, Yasunari	25P-137, 25P-146, 26P-138, 26P-242	Yoshimura, Kimio 27P-258 Yoshimura, Kohei 26P-103, 27P-033
Yokoya, Ryo	25P-128	Yoshimura, Shige H. *HT-E, 25P-156
Yokoyama, Fumiaki	<b>26P-265</b>	Yoshimura, Yu <b>27P-141</b>
Yokoyama, Kazuki	<b>27P-128</b>	Yoshimura, Yuki 27P-160
Yokoyama, Ken	25P-105, 25P-109, 26P-077, 27P-012	Yoshina, Sawako 25P-166 Yoshinaga, Natsuhiko 25P-235
Yokoyama, Takeshi	S8-5, 25P-062, 26P-009, 26P-012, 26P-088	Yoshinaga, Takuma 27P-113 Yoshinaga, Takuro <b>27P-086</b>
Yonezawa, Kento	26P-042, 27P-014, <b>28P-003</b> , 28P-148	Yoshino, Ryunosuke 28P-187, 28P-188, 28P-189
Yonta Tostani, Fofou	27P-102	Yoshio, Maki 26P-105
Yoo, Jejoong	28P-094	Yoshioka, Aoba 26P-119, 28P-103
Yoo, Jungmin	28P-094	Yoshioka, Yusuke 25P-258
Yoshida, Hideji	25P-083	Yoshizawa, Susumu 27P-171, 28P-146
Yoshida, Kazuhiro	27P-172, 28P-154	Yoshizumi, Rei 25P-170
Yoshida, Kazunari	<b>26P-144</b>	Yosimura, Kohei 27P-031
Yoshida, Koki	<b>26P-089</b>	You, Huijuan <b>S26-1</b> , 25P-090
Yoshida, Naoki	<b>25P-088</b>	Yu, Feng <b>26P-030</b>
Yoshida, Natsumi	28P-002	Yu, Hao <b>27P-116</b>
Yoshida, Norio	25P-066, 26P-213, 27P-034	Yu, Isseki 28P-204
Yoshida, Takeshi	25P-240	Yu, Yan 27P-106
Yoshida, Toya	<b>26P-152</b>	Yu, Ye 25P-006, 26P-010
Yoshida, Yuko	<b>26P-085</b>	Yu-Chung Lin, Yu-Chung 28P-243
Yoshidome, Takashi	<b>26P-212</b> , 26P-214, 27P-206, 28P-222	Yuasa, Haruka <b>26P-118</b>
Yoshie, Harada	28P-023	Yue, Chenxi 25P-005
Yoshikawa, Chiaki	28P-267	Yuji, Furutani 25P-170
Yoshikawa, Kenichi	YF-1, 27P-186, 28P-132	Yuki, Haruka 25P-136
Yoshikawa, Masahito	<b>27P-202</b>	Yunoki, Yasuhiro 28P-008, 28P-231
Yoshiki, Nakajima	25P-175	Yura, Kei 27P-165
Yoshimi, Akira	25P-040	Yurenko, Yevgen 26P-031
Yoshimura, Futa	<b>26P-037</b>	Yurtsever, Ayhan 27P-095
Yoshimura, Hideaki	27P-161, 28P-139,	Yusa, Shin-ichi 27P-141
		Yusuke, Morimoto 25P-251

# Chairs and Speakers Index

Yuyama, Kohei	<b>BP10-1</b>	Zhang, Ziyun	28P-160
Yuzaki, Michisuke	28P-138	Zhao, Boxiao	<b>28P-138</b> , 28P-139
Yuzu, Keisuke	<b>YF-5</b> , S25-4, 26P-039, <b>26P-041</b> , 27P-006, 27P-041	Zhao, Changjian	26P-255
		Zhao, Qingci	25P-246
		Zhao, Shufneg	<b>S22-6</b>
		Zhao, Wenyang	<b>26P-239</b>
		Zhao, Yimeng	25P-003, 25P-011, 26P-010
		Zhao, Zhixuan	<b>25P-012</b>
		Zhao, Ziqing Winston	<b>26P-116</b>
		Zhe-Rui Lin, Zhe-Rui	28P-243
		Zheng, Yuxiang	<b>26P-002</b>
		Zhong, Chongxia	<b>26P-061</b>
		Zhou, Huan	26P-030
		Zhou, Junxian	<b>25P-150</b>
		Zhou, Tiankun	28P-011
		Zhu, Bo	25P-056, 25P-058, <b>25P-065</b> , 25P-257
		Zhu, Guang	<b>S27-5</b>
		Zhu, Jingwen	28P-173
		Zhu, Lijun	S32-4
		Zhu, Lucy	S16-6
		Zhuo, Guan Yu	28P-121
		Zhuo, Guan-Yu	<b>S4-4</b>
		Zich, Helena	28P-017
		Ziyun, Zhang	<b>26P-257</b>
		Zorila, Bogdan	28P-258
		Zou, Jinyun	26P-153
		Zou, Ruisi	<b>25P-211</b>
		Zuo, Hongwei	<b>26P-081</b>
		Zuzic, Lorena	S19-2, 25P-266, <b>27P-194</b>
		Žuna, Kristina	26P-079
<b>Z</b>			
Zaigraev, Maxim	28P-064		
Zanardi, Ilaria	25P-272		
Zemljič Jokhadar, Špela	26P-130		
Zeng, Xiangze	25P-034, <b>26P-067</b>		
Zeng, Yi	25P-001		
Zeng, Yi Cheng	<b>25P-023</b>		
Zerio, Chris	S3-5		
Zhai, Linhui	28P-046		
Zhang, Bicheng	<b>26P-237</b>		
Zhang, Bin	28P-136		
Zhang, Feng	<b>PL-1</b>		
Zhang, Guoqing	<b>27P-065</b>		
Zhang, Jing	<b>26P-136</b>		
Zhang, Shouxiang	25P-068		
Zhang, Tongshan	28P-163		
Zhang, Wancheng	<b>26P-186</b>		
Zhang, Wenyue	<b>26P-008</b>		
Zhang, Xianjun	28P-158		
Zhang, Xiaomeng	S1-4		
Zhang, Xin	<b>28P-136</b>		
Zhang, Yangyang	<b>25P-197</b>		
Zhang, Yanjun	28P-101		
Zhang, Yashuo	S26-1, <b>25P-090</b>		
Zhang, Yue	<b>28P-184</b>		
Zhang, Yuqing	25P-003		
Zhang, Zecheng	<b>26P-001</b>		
Zhang, Zhuqing	<b>27P-225</b>		
Zhang, Ziyi	25P-012, <b>25P-014</b>		

# Awards

---

The following awards will be offered by IUPAB, IUPAB2024 and Biophysical Society of Japan (BSJ).

## Awards and Awardees

### 1. The Avanti Prize Lecture

Location: Room A  
 Date & time: Monday, June 24 17:00-17:40  
 Chairs: Manuel Prieto (University of Lisbon, Portugal)  
 Anthony Watts (University of Oxford, UK)  
 Awardee: Massimo Olivucci (University of Siena)

### 2. The Young Investigator Award Lecture

Location: Room A  
 Date & time: Wednesday, June 26 16:00-16:40  
 Chairs: Manuel Prieto (University of Lisbon, Portugal)  
 Anthony Watts (University of Oxford, UK)  
 Awardee: Hideaki Kato (The University of Tokyo)

### 3. The Bei Lecture

Location: Room A  
 Date & time: Thursday, June 27 18:30-19:10  
 Chair: Tao Xu (National Laboratory of Biomacromolecules, Guangzhou)  
 Awardee: Xiyun Yan (Institute of Biophysics, Chinese Academy of Sciences)

### 4. BPS Award Lecture

Location: Room B-1  
 Date & time: Wednesday, June 26 16:40-17:30  
 Chair: Kumiko Hayashi (The University of Tokyo)  
 Presenter: Jennifer Pesanelli (Biophysical Society)  
 Awardee: Jerelle A. Joseph (Princeton University)

### 5. ABA Young Investigator Award Lecture

Location: Room E  
 Date & time: Thursday, June 27 16:00-18:20

## Awards

---

Chairs: Shang-Te Danny Hsu (President of ABA, member of Biophysical Society of R.O.C, Academia Sinica)

Haibin Su (Member of The Biophysical Society of Hong Kong, Hong Kong University of Science and Technology)

Awardee: Tetsuhiro S. Hatakeyama (Tokyo Institute of Technology)

### 6. The 20th Early Career Award in Biophysics Candidate Presentations

Location: Room A

Date & time: Tuesday, June 25 10:00-12:20

Up to five awardees of the Early Career Award in Biophysics will be selected from the candidates, and the rest of the candidates will be given the Early Career Presentation Award. The awardees will be announced at the Conference Dinner.

### 7. IUPAB2024 Student and Early Career Researcher Poster Award

The awardees will be selected by voting. Please access your “My Page” to vote. You can choose up to 10 nominees.

Names, titles and affiliations of the awardees as well as their presentation title will be announced at the Closing Ceremony of IUPAB2024.

Voting period: Monday, June 24 12:00 – Thursday, June 27 18:30

### 8. Nakatani Foundation Award

The awardee(s) will be announced at the Conference Dinner.

### 9. BPS-IUPAB Student Presentation Award

The awardee(s) will be announced at the Conference Dinner.



# Sponsor Acknowledgements

---

## Sponsored by

Avanti Polar Lipids

BLAST Inc.

Bruker Japan K.K.

Carl Zeiss Co. Ltd.

CellFree Sciences Co., Ltd

Chroma Technology Japan

Clinica Publishers, LLC

Digital Bioassay Laboratory, The University of Tokyo and TOPPAN Holdings Inc.

eLife Sciences Publications Ltd.

Evident Corporation

FUJIFILM Wako Pure Chemical Corporation

GeneFrontier

HAMAMATSU PHOTONICS K.K.

HORIBA, Ltd.

IKEDA SCIENTIFIC Co., Ltd.

Japan Agency for Medical Research and Development

Japan Laser Corporation

Japan Synchrotron Radiation Research Institute (JASRI)

JEOL Ltd.

JST PRESTO, Dynamic supra-assembly of biomolecular systems

Kiko Tech Co., Ltd.

Leica Microsystems K.K.

MEXT KAKENHI Grant-in-Aid for Transformative Research Area (A) "Material properties determine body shapes and their constructions" and "Integration of Extracellular Information by Multimodal ECM Activity"

Nacalai Tesque, INC

Nagoya Institute of Technology & SHIMADZU CORPORATION

Nakatani Foundation

Nanion Technologies Japan K.K.

NanoAndMore Japan K.K.

Nikon Solutions

On-chip Biotechnologies Co., Ltd

ORIENTAL GIKEN INC.

Oxford Instruments K.K.

# Sponsor Acknowledgements

---

Pinpoint Photonics, Inc.  
Promega K.K.  
QIAGEN K.K.  
Quantum Design Japan  
Refeyn  
Research Institute of Biomolecule Metrology Co., Ltd.  
Revvity Japan Co., Ltd.  
Rigaku Corporation  
SIGMAKOKI CO., LTD.  
Sysmex Corporation  
TAITEC CORPORATION  
Tecan Japan Co., Ltd.  
The Biophysical Society of Japan  
The Biophysical Society of Japan & Acaric.co.ltd.  
The DNA Bank, RIKEN BioResource Research Center (RIKEN BRC DNABank)  
Thermo Fisher Scientific  
Thorlabs Japan Inc.  
Tokai Hit Co., Ltd.  
Tokyo Chemical Industry Co., Ltd.  
TOKYO OHKA KOGYO CO., LTD.  
TOYOBO CO., LTD.  
Twist Bioscience Corporation  
Worldwide Protein Data Bank  
Yamato Scientific Co., Ltd.  
Yokogawa Electric Corporation

## Supported by

Japanese Society for Bioinformatics  
Kyoto City  
Kyoto Prefecture  
Protein Science Society of Japan  
The Crystallographic Society of Japan  
The Japan Society of Applied Physics  
The Molecular Biology Society of Japan

The Photobiology Association of Japan  
The Physical Society of Japan  
The Physiological Society of Japan  
The Union of Japanese Societies for Biological Science

**Grants provided by**

Kyoto Convention Bureau  
The Naito Foundation  
Toshiaki Ogasawara Memorial Foundation

**Donations by The Federation of Pharmaceutical Manufacturers' Associations of JAPAN**

Alfresa Pharma Co., Ltd.  
Asahi Kasei Pharma Co., Ltd.  
Astellas Pharma Co., Ltd.  
AstraZeneca K.K.  
Asuka Pharmaceutical Co., Ltd.  
Chugai Pharmaceutical Co., Ltd.  
Daiichi Sankyo Co., Ltd.  
Eiken Chemical Co., Ltd.  
Eisai Co., Ltd.  
Fuso Pharmaceutical Industry Co., Ltd.  
Japan Organ Pharmaceutical Co., Ltd.  
Japan Tobacco Industry Co., Ltd.  
Kaken Pharmaceutical Co., Ltd.  
Kissei Pharmaceutical Industry Co., Ltd.  
Kracie Co., Ltd.  
Kyorin Pharmaceutical Co., Ltd.  
Kyowa Kirin Co., Ltd.  
Maruho Co., Ltd.  
Maruishi Pharmaceutical Co., Ltd.  
Meiji seika Pharma Co., Ltd.  
Minophagen Pharmaceutical Co., Ltd.  
Mitsubishi Tanabe Pharma Co., Ltd.  
Mochida Pharmaceutical Co., Ltd.

# Sponsor Acknowledgements

---

Nippon Boehringer Ingelheim Co., Ltd.  
Nippon Chemifa Co., Ltd.  
Nippon Kayaku Co., Ltd.  
Nippon Shinyaku Co., Ltd.  
Nipro Pharma Co., Ltd.  
Ono Pharmaceutical Co., Ltd.  
Otsuka Pharmaceutical Co., Ltd.  
Otsuka Pharmaceutical Factory Co., Ltd.  
Rohto Pharmaceutical Co., Ltd.  
Santen Pharmaceutical Co., Ltd.  
Sanwa Kagaku Institute Co., Ltd.  
Sato Pharmaceutical Co., Ltd.  
Sawai Pharmaceutical Co., Ltd.  
Shionogi Pharmaceutical Co., Ltd.  
Sumitomo Pharma Co., Ltd.  
Taiho Pharmaceutical Co., Ltd.  
Taisho Pharmaceutical Co., Ltd.  
Teijin Pharma Ltd.  
Terumo Corporation  
The Takeda Pharmaceutical Company Limited  
Toa Eiyo Co., Ltd.  
Torii Pharmaceutical Co., Ltd.  
Towa Pharmaceutical Co., Ltd.  
Tsumura Co., Ltd.  
Wakamoto Pharmaceutical Co., Ltd.  
Yakult Honsha Co., Ltd.  
Zeria Pharmaceutical Industry Co., Ltd.