

**- Poster Session -**  
12:10-13:50, July 5<sup>th</sup> (Thu)

- P-1 **Shuhei Koeda, Katsunari Umezaki, Shunsuke Sakai, Tomoyasu Noji, Takehisa Dewa, Toshihisa Mizuno,\* Toshiki Tanaka** (Nagoya Institute of Technology)  
Evaluation of photo-induced electron transfer activity of Photosystem I, II (PSI, II) derived from *Thermosynechococcus elongatus* using peptide gemini surfactants
- P-2 **Yuki Goto, Yumi Ito, Hiroaki Suga** (The University of Tokyo)  
An Artificial In Vitro Biosynthesis System Reveals a Unique Catalytic Activity of a Posttranslational Heterocyclase
- P-3 **Yewon Kim, Jiye Hahm, Soonsil Hyun, Jaehoon Yu** (Seoul National University)  
Apolipoprotein A-Mimic Peptide With Naphthylalanine Can Enhance Cholesterol Efflux From Macrophage
- P-4 **Satoru Nagatoishi,<sup>1,2</sup> Naoki Sugimoto<sup>2,3</sup>** (<sup>1</sup>The University of Tokyo, <sup>2</sup>FIBER, Konan University <sup>3</sup>FIRST, Konan University)  
Thermodynamics and hydration effects on the interaction between DNA G-quadruplex and thrombin
- P-5 **Naoya Okiyama, Eriko Ohta, Jun-ichi Oku, Takehisa Dewa, Toshihisa Mizuno,\* Toshiki Tanaka** (Nagoya Institute of Technology)  
Preparation and characterization of green fluorescent protein (GFP)-poly(2-vinylpyridine) conjugates
- P-6 **Keigo Aoi, Yuma Takano, Daisuke Kawano** (Nagoya University)  
Synthesis and Thermoresponsive Properties of a Star-shaped Dendrimer Having Pseudopeptide Arms
- P-7 **Tsuyoshi Takahashi** (Gunma University)  
Construction of fluorescent proteins that present a C-terminal region of amyloid peptide
- P-8 **Hitoshi Ishida, Yoshimi Shiina** (Kitasato University; PRESTO, JST)  
Toward an Artificial Photosynthetic System: Photo-induced Electron Transfer in Peptides Based on Viologen-Ruthenium-Tyrosine Complex
- P-9 **Yoshiko Miura, Tomohiro Fukuda** (Kyushu University)  
Control of aggregation and toxicity of Alzheimer Amyloid  $\beta$  peptide (1-42) on the multivalent sulfonated sugar interface
- P-10 **Sunbum Kwon, Hee-Seung Lee\*** (KAIST)  
Self-Assembled Peptide Architecture with a Tooth Shape: Folding into Shape
- P-11 **Nabanita Sadhukhan, Takahiro Muraoka, Mihoko Ui, Kazushi Kinbara\*** (Tohoku University)  
Designer PEG-Conjugates for Protein Stabilization

- P-12 **Hiroshi Tsutsumi, Masaki Tsuchiya, Toshiki Sawada, Tsuyoshi Takahashi Hisakazu Mihara** (Tokyo Institute of Technology)  
Self-Assembling Peptide Materials for Cell Scaffolds
- P-13 **Toshihisa Mizuno\***, Kentaro Ichiki, Takuya Ukon, Takehisa Dewa, Toshiki Tanaka (Nagoya Institute of Technology)  
Preparation and characterization of protein-PEDOT conjugates
- P-14 **Mihoko Ui, Kousuke Harima, Yoshikazu Tanaka, Toshiaki Takei, Kouhei Tsumoto and Kazushi Kinbara** (Tohoku University)  
Construction of photocontrollable nano-pore devices by grafting an engineered transmembrane units
- P-15 **Hiroshi Murakami, Takahiro Ishizawa** (The University of Tokyo)  
Quick Display: a method for facilitating selection of functional peptides and proteins
- P-16 **Ikuo Fujii, Fumihiro Ishikawa, Takeshi Tsumuraya** (Osaka Prefecture University)  
Holoabzyme: A Single Antibody Catalyzes Multiple Chemical Transformations upon Replacement of Artificial Cofactors
- P-17 **Yoshihiro Katsura, Akira Kanno, Takeaki Ozawa** (The University of Tokyo)  
Optical Control of Akt/PKB Activity and Its Application to Biological System
- P-18 **Ikuhiko Nakase, Shinya Okumura, Katsuhiko Osaki, and Shiroh Futaki** (Kyoto University)  
Artificial Receptor System Activated by Bivalent Leucine-Zipper Ligand
- P-19 **Md. Shamim Reza, Hiroaki Suga\*** (The University of Tokyo)  
RaPID display mediated development of PAD4 inhibitors using dynamic virtual bicyclic peptide scaffolds
- P-20 **Seiji Sakamoto, Anna Hugo, Mika Terauchi, Yasuyuki Araki, Takehiko Wada** (Tohoku University)  
Creation of A Sensing System for Caspase Activities by Combination of Split-Fluorescent Proteins and Split-Inten
- P-21 **Jumpei Morimoto, Hiroaki Suga\*** (The University of Tokyo)  
Discovery of macrocyclic peptides armed with a mechanism-based warhead that isoform-selectively inhibit a human deacetylase SIRT2
- P-22 **Takamitsu Miyafusa<sup>1</sup>, Jose M. M. Caaveiro<sup>1</sup>, Yoshikazu Tanaka<sup>2</sup> Kouhei Tsumoto<sup>1</sup>** (<sup>1</sup>Univ. of Tokyo, <sup>2</sup>Hokkaido Univ.)  
In vitro Screening and Characterization of Inhibitors for Capsular Polysaccharide Synthesizing Enzyme CapF

- P-23 **Takahiro Hayashi, Yedi Sun, Zhining Song, Yosuke Takaoka, Itaru Hamachi** (Kyoto University)  
Semi-synthesis of DMAP-tethered lectin as glyco-conjugates selective labeling tool
- P-24 **Kazushi Akaoka, Masayasu Taki, Yukio Yamamoto** (Kyoto University)  
Development of Highly Sensitive Time-Resolved Luminescence Sensors for Zinc Ion
- P-25 **Kazuya Kikuchi** (Osaka University)  
Design, Synthesis and Biological Application of in Vivo Imaging Probes with Tunable Chemical Switches
- P-26 **Anna Hugo, Seji Sakamoto,\* Yasuyuki Araki, Takehiko Wada\*** (Tohoku University)  
Design of Novel Circularly Permutated and Fragmented Fluorescent Protein Enabling Spontaneous Reassembly and Functional Recovery
- P-27 **Yu Kushida, Kenjiro Hanaoka, Tetsuo Nagano** (The University of Tokyo)  
Development of a red fluorescent scaffold for highly sensitive protease probes and Its application
- P-28 **Hyejin Park, Hiroshi Tsutsumi, Hisakazu Mihara** (Tokyo Institute of Technology)  
Drug delivery using  $\alpha$ -helical peptide-conjugated gold nanoparticles with cell penetrating activity
- P-29 **Kyungtae Kang, Sung-Eun Choi, Hee-Su Jang, Woo Kyung Cho, Jin Seok Lee,\* Yoonkey Nam,\* Insung S. Choi\*** (KAIST)  
Acceleration of Neurite Development on Nanostructured Substrates: A Comparative Study on Various Nanotopographies
- P-30 **Yuri Lee, Sangeun Park, Jaehoon Yu\*** (Seoul National University)  
Selective Lipase Substrate and Inhibitor Containing Short Aromatic Peptidyl Moieties
- P-31 **Katsumasa Fujiki,<sup>1</sup> Mizuho Hasegawa,<sup>2</sup> Naohiro Inohara,<sup>2</sup> Yukari Fujimoto,<sup>1\*</sup> Koichi Fukase<sup>1</sup>** (<sup>1</sup>Osaka University, <sup>2</sup>The University of Michigan)  
Synthesis and biological analysis of molecular probes for elucidation of the Nod1-immunostimulating mechanism of peptidoglycan
- P-32 **Sung-Kyun Ko, Sunghyun Park, Injae Shin\*** (Yonsei University)  
Apoptozole, a Novel Inhibitor for Hsp70, Has Antitumor Activities by Suppressing Interaction of Hsp70 with Apaf-1
- P-33 **Sung-Kyun Ko, Sunghyun Park, Injae Shin\*** (Yonsei University)  
A Sulfonamide-Based Small Molecule Induces Aberrant Heart Development in Zebrafish Through the AhR-mediated, CYP1A-Independent Pathway

- P-34 **SH. Sim, N. Asakura\*** (Tokyo Institute of Technology)  
Direct electrochemical analysis of cytochrome  $c_3$
- P-35 **Hiroshi Nonaka,<sup>1</sup> Takeshi Tokunaga,<sup>1</sup> Shigeyuki Namiki,<sup>2</sup> Katsuhiro Yamada,<sup>1</sup> Takahiro Imaishi,<sup>1</sup> Kenzo Hirose,<sup>2</sup> Shinsuke Sando<sup>1\*</sup>**  
(<sup>1</sup> Kyushu University, <sup>2</sup>The University of Tokyo)  
Realtime imaging of chemical transmitter dynamics on cell surface using fluorescent aptamer sensor
- P-36 **S. Takenaka,<sup>1</sup> K. Sota,<sup>1</sup> S. Ohzawa,<sup>1</sup> S. Sato,<sup>1</sup> T. Matsuda,<sup>2</sup> T. Nagai,<sup>2</sup> Y. Yoshiura,<sup>3</sup> K. Nakazawa<sup>3</sup>** (<sup>1</sup>Kyushu Institute of Technology, <sup>2</sup>Osaka University, <sup>3</sup>The University of Kitakyushu)  
Fluorescence imaging of biological potassium using peptide-oligonucleotide conjugate probe
- P-37 **Yasutaka Kurishita, Itaru Hamachi** (Kyoto University)  
An Organelle-Localized Fluorescence Chemosensor for Analysis of Nucleoside Polyphosphate Dynamics
- P-38 **Juno Lee, Sung Ho Yang, and Insung S. Choi** (KAIST)  
Layer-by-Layer Assembly of Individual Yeast Cells with Catechol-grafted Polyelectrolytes
- P-39 **Jooyoun Bae, Masayasu Mie, Eiry Kobatake** (Tokyo Institute of Technology)  
Development of specific gene delivery system using IgG binding fusion protein
- P-40 **Yasunori Kajiki,<sup>1</sup> Mami Katsumoto,<sup>1</sup> Tsukasa Seya,<sup>2</sup> Naohiro Inohara,<sup>3</sup> Yukari Fujimoto,<sup>1\*</sup> Koichi Fukase<sup>1</sup>** (<sup>1</sup>Osaka University, <sup>2</sup>Hokkaido University, <sup>3</sup>University of Michigan)  
Immunomodulation and receptor recognition of chemically conjugated lipo- and glycopeptide
- P-41 **Daewha Hong, Eun Hyea Ko, Juno Lee, Sung Ho Yang, Insung S. Choi\*** (KAIST)  
Encapsulation of Individual Yeast Cells by Poly(norepinephrine) Coating
- P-42 **Seonghyun Park, Sung-Kyun Ko, Injae Shin\*** (Yonsei University)  
An inhibitor that binds to an ATPase domain of Hsc70 promotes membrane trafficking of misfolded CFTR and restoration of its chloride channel activity
- P-43 **Akio Ojida,<sup>1</sup> Hiroshi Nonaka,<sup>2</sup> Itaru hamachi<sup>3</sup>** (Kyushu University)  
Selective Labeling of Cell Proteins Using a New Peptide Tag-Probe Pair
- P-44 **Takahiro Egawa, Kenjiro Hanaoka, Yuichiro Koide, Sakiko Ujita, Naoya Takahashi, Yuji Ikegaya, Norio Matsuki, Tetsuo Nagano** (The University of Tokyo)  
Development of a Far-Red to Near-Infrared Fluorescence Probe for Calcium Ion

- P-45 **S. Yamaguchi**,<sup>1\*</sup> **S. Yamahira**,<sup>1</sup> **K. Sumaru**,<sup>2</sup> **T. Kanamori**,<sup>2</sup> **T. Nagamune**<sup>1</sup>  
(<sup>1</sup>The University of Tokyo, <sup>2</sup>AIST)  
Spatio-Temporal Control of Cell Patterns on Photo-Cleavable PEG-Lipid Surfaces
- P-46 **Shinya Tsukiji**,<sup>1</sup> **Manabu Ishida**,<sup>1</sup> **Hideaki Watanabe**,<sup>2</sup> **Kazumasa Takigawa**,<sup>2</sup>  
**Yasutaka Kurishita**,<sup>3</sup> **Itaru Hamachi**<sup>3</sup> (<sup>1</sup>Top Runner Incubation Center for  
Academia-Industry Fusion, <sup>2</sup>Nagaoka University of Technology, <sup>3</sup>Kyoto University)  
Controlling Cell Signaling with Self-Localizing Ligands
- P-47 **Ambara R. Pradipta**, **Katsunori Tanaka** (RIKEN)  
Reaction based approach of novel post-translational modification
- P-48 **Hiroshi Takayama**, **Takashi Moriya**, **Ayano Kawamata**, **Yoshiharu Iwabuchi**,  
**Naoki Kanoh** (Tohoku University)  
Detection of cytochrome P450 substrates using a small-molecule droplet array on an  
NADH-immobilized solid surface
- P-49 **S. Sato**,<sup>1,2</sup> **K. Mori**,<sup>3</sup> **M. Kodama**,<sup>3,4</sup> **M. Habu**,<sup>3,4</sup> **T. Nishihara**,<sup>4,5</sup> **K. Tominaga**,<sup>3,4</sup>  
**S. Takenaka**<sup>1,2</sup>  
(<sup>1</sup>Kyushu Institute of Technology, <sup>2,3,4</sup>Kyushu Dental College)  
Development of electrochemical telomerase assay (ECTA) aiming at cancer  
diagnosis and drug discovery
- P-50 **Takehiko Wada**,<sup>1\*</sup> **Ryohei Uematsu**,<sup>1</sup> **Tatsuya Mizutani**,<sup>1</sup> **Akira Nagami**,<sup>2</sup>  
**Seiji Sakamoto**,<sup>1</sup> **Yasuyuki Araki**,<sup>1</sup> **Shiroh Futaki**,<sup>3</sup> **Yoshihisa Inoue**,<sup>2</sup>  
(<sup>1</sup>Tohoku University, <sup>2</sup>Osaka University, <sup>3</sup>Kyoto University)  
Novel Strategy for Cancer Cell Specific Oligonucleotide Therapeutics with  
Intracellular Environmental Condition Responsible Peptide Ribonucleic Acids
- P-51 **Hisae Tateishi-Karimata**,<sup>1</sup> **Naoki Sugimoto**<sup>1,2\*</sup>  
(<sup>1</sup>FIBER, and <sup>2</sup>FIRST, Konan University)  
Regulation of the DNA Stability using a Hydrated Ionic Liquid toward the  
Development of New DNA Sensing Systems
- P-52 **Yusuke Kitamura**, **Shikinari Yamamoto**, **Yuka Osawa**, **Toshihiro Ihara**  
(Kumamoto University)  
Versatile molecular beacons based on the reversible formation of luminous  
lanthanide complexes
- P-53 **Izabella Czerwinska**, **Shinobu Sato**, **Shigeori Takenaka**  
(Kyushu Institute of Technology)  
Binding study of naphthalene diimide derivative carrying two dipicolylamine  
moieties with human telomeric DNA
- P-54 **Hiroyuki Asanuma**, **Hiroshi Ito**, **Masaaki Urushihara**, **Xingguo Liang**,  
**Hiromu Kashida** (Nagoya University)  
Development of functional siRNA for activating RNAi and tracing RISC

- P-55 **Yuuya Kasahara,<sup>1</sup> Yuuta Irisawa,<sup>1</sup> Aiko Yahara,<sup>2</sup> Satoshi Obika,<sup>2</sup> Masayasu Kuwahara<sup>1</sup>** (<sup>1</sup>Gunma University, <sup>2</sup>Osaka University)  
High-affinity DNA Aptamers with Base- and Sugar-modifications Readily Obtained by CE-SELEX
- P-56 **Eiji Nakata,<sup>1,2</sup> Ngo Anh Tien,<sup>1</sup> Fong Fong Liew,<sup>1</sup> Takashi Morii<sup>1,2</sup>** (<sup>1</sup>Kyoto University, <sup>2</sup>CREST, JST)  
Using DNA binding proteins for site-specific positioning of proteins on DNA origami
- P-57 **Yusuke Takezawa,<sup>1</sup> Jean-Louis Duprey,<sup>1</sup> Akira Sakamoto,<sup>1</sup> Song Liu,<sup>2</sup> Guido H. Clever,<sup>1</sup> Motoo Kaneko,<sup>1</sup> Kentaro Tanaka,<sup>3</sup> Xuefeng Guo,<sup>2</sup> Mitsuhiro Shionoya<sup>1\*</sup>** (<sup>1</sup>The University of Tokyo, <sup>2</sup>Peking University, <sup>4</sup>Nagoya University)  
Metal-mediated Alternative DNA Base Pairs as a Potential Component of DNA-based Nanomaterials
- P-58 **Keiji Murayama, Yoshihiro Tanaka, Hiromu Kashida and Hiroyuki Asanuma** (Nagoya University)  
Functionalization of novel artificial nucleic acids from acyclic diols by the conjugation with dyes
- P-59 **Toshihiro Ihara, Akika Futamura, Yusuke Kitamura, Yusuke Sato, Seiichi Nishizawa, Norio Teramae** (Kumamoto University and Tohoku University)  
DNA/RNA Probing Using Rationally Selected Two DNA Ligands
- P-60 **Yuki Ishizawa, Kaname Sasaki, Nao Iwamoto, Shinya Hagihara Fumi Nagatsugi** (Tohoku University)  
Revisiting the Interstrand Cross-linking Reaction: PNAs to Oligonucleotides
- P-61 **Regina Salmasan, Masahiro Nagasaki, Yoshiyuki Manabe, Katsunori Tanaka, Koichi Fukase** (Osaka University)  
Solid Supported Synthesis of N-Glycans: N-Glycosylation and Cleavage