

Program

July 4 (Wednesday)

- 13:30 - 13:40 **Welcome Address**
Prof. Koichi Fukase (Osaka University)
- Session 1 Protein and Peptide Structure and Interaction**
- 13:40 – 14:05 **Prof. Fujie Tanaka** (Okinawa Institute of Science and Technology Graduate
IL-1 University)
“Enamine-Based Catalysis: Synthesis of Amino Acids and Sugars”
- 14:05 - 14:30 **Prof. Kazushi Kinbara** (Tohoku University)
IL-2 *“Development of Supramolecular Tools for Manipulation of Proteins”*
- 14:30 - 14:55 **Prof. Chun-Hung Hans Lin** (Academia Sinica)
IL-3 *“In vivo Tagging and Characterization of S-Glutathionylated Protein by a
Chemoenzymatic Method”*
- 14:55 - 15:20 **Prof. Hee-Seung Lee** (KAIST)
IL-4 *“3D Organic Molecular Architectures: Folding into Shapes”*
- 15:20 - 15:45 **Prof. Kazunori Matsuura** (Tottori University)
IL-5 *“Synthetic Capsids Self-assembled from Viral Peptide Fragments”*
- 15:45 - 16:10 **Prof. Takeshi Tsumuraya** (Osaka Prefecture University)
IL-6 *“Production of Monoclonal Antibodies for Sandwich ELISA Detection of Pacific
Ciguatoxins”*
- 16:10 - 16:25 Coffee Break
- Session 2 Molecular Strategies for Chemical Biology**
- 16:25 - 16:50 **Prof. Injae Shin** (Yonsei University)
IL-7 *“Bifunctional Molecules That Induce Neurogenesis And Apoptosis”*

- <Chairperson: Prof. Hitoshi Ishida>
 16:50 - 17:15 **Prof. Junko Ohkanda** (Osaka University)
 IL-8 *“Fusicoccin-based Fluorescent Probes for Detecting 14-3-3 Interactions with Phosphorylated Ligands”*
- <Chairperson: Prof. Naoki Kanoh>
 17:15 - 17:40 **Prof. Kenjiro Hanaoka** (The University of Tokyo)
 IL-9 *“Development of Far-Red to Near-Infrared Fluorescent Dyes and their Applications to Multicolor Imaging”*
- <Chairperson: Prof. Naoki Kanoh>
 17:40 - 18:05 **Prof. Yong-Uk Kwon** (Ewha Womans University)
 IL-10 *“Development of Peptoid-Based Chemical Tools for Biological Applications”*
- <Chairperson: Prof. Mitsuhiro Shionoya>
 18:05 - 18:30 **Prof. Shao Q. Yao** (National University of Singapore)
 IL-11 *“Cell-Based Proteome Profiling of Potential Drug Targets – Case Studies with Orlistat™ and Dasatinib™”*
- <Chairperson: Prof. Mitsuhiro Shionoya>
 18:30 - 18:55 **Prof. Seung Bum Park** (Seoul National University)
 IL-12 *“Discovery of Novel Therapeutic Agents using Molecular Diversity and Chemical Biology (Seoul-Fluor and FITGE technology)”*
- 19:15 - 21:00 **Banquet**
 [“Coral West Ball Room” in Southern Beach Hotel & Resort OKINAWA]

July 5 (Thursday)

Session 3 DNA Structure and Biological Function

- <Chairperson: Prof. Naoki Sugimoto>
 9:00 - 9:25 **Prof. Anh Tuan Phan** (Nanyang Technological University)
 IL-13 *“Structure and Recognition of DNA and RNA G-quadruplexes”*
- <Chairperson: Prof. Fumi Nagatsugi>
 9:25 - 9:50 **Prof. Kazuo Harada** (Tokyo Gakugei University)
 IL-14 *“Engineerability of a Functional Ribonucleoprotein Complex”*
- <Chairperson: Prof. Shigeori Takenaka>
 9:50 - 10:15 **Prof. Kyeong Kyu Kim** (Sungkyunkwan University School of Medicine)
 IL-15 *“Structural Studies of Z-DNA and Z-DNA Binding Proteins”*
- 10:15 – 10:25 Coffee Break

- <Chairperson: Prof. Toshihiro Ihara>
10:25 - 10:50 **Prof. Duhee Bang** (Yonsei University)
IL-16 “ ‘Shotgun DNA Synthesis’ for the High-throughput Construction of Large DNA Molecules”
- <Chairperson: Prof. Takehiko Wada>
10:50 - 11:15 **Prof. Jaehoon Yu** (Seoul National University)
IL-17 “Apolipoprotein A-Mimic Peptide with Naphthylalanine Can Enhance Cholesterol Efflux from Macrophage”
- 11:15 - 12:05 **Short presentation** (5 min for each presentation)
<Chairperson: Prof. Naoki Kanoh>
- P-2 **Prof. Yuki Goto** (The University of Tokyo)
“An Artificial *in vitro* Biosynthesis System Reveals a Unique Catalytic Activity of a Posttranslational Heterocyclase”
- P-49 **Prof. Shinobu Sato** (Kyushu Institute of Technology)
“Development of Electrochemical Telomerase Assay (ECTA) Aiming at Cancer Diagnosis and Drug Discovery”
- P-46 **Prof. Shinya Tsukiji** (Nagaoka University of Technology)
“Controlling Cell Signaling with Self-localizing Ligands”
- P-56 **Prof. Eiji Nakata** (Kyoto University)
“Using DNA Binding Proteins for Site-specific Positioning of Proteins on DNA Origami”
- P-4 **Prof. Satoru Nagatoishi** (The University of Tokyo)
“Thermodynamics and Hydration Effects on the Interaction between DNA G-Quadruplex and Thrombin”
- P-14 **Prof. Mihoko Ui** (Tohoku University)
“Construction of Photocontrollable Nano-Pore Devices by Grafting an Engineered Transmembrane Units”
- P-52 **Prof. Yusuke Kitamura** (Kumamoto University)
“Versatile Molecular Beacons based on the Reversible Formation of Luminous Lanthanide Complexes”
- P-20 **Prof. Seiji Sakamoto** (Tohoku University)
“Creation of a Sensing System for Caspase Activities by Combination of Split-Fluorescent Proteins and Split-Intein”
- P-45 **Prof. Satoshi Yamaguchi** (The University of Tokyo)
“Spatio-Temporal Control of Cell Patterns on Photo-Cleavable PEG-Lipid Surfaces”

Short presentation (5 min for each presentation) cont.

P-35 **Prof. Hiroshi Nonaka** (Kyushu University)
“*Realtime Imaging of Chemical Transmitter Dynamics on Cell Surface Using Fluorescent Aptamer Sensor*”

12:05 – 13:50 **Lunch & Poster Session** [“Coral West Ball Room”]

Session 4 Nanobio-science and Technology for Living Systems

<Chairperson: Prof. Shiorh Futaki>

13:50 - 14:15 **Prof. Young-Tae Chang** (National University of Singapore)
IL-18 “*HT Image Probe Development using Diversity-Oriented Fluorescence Library Approach (DOFLA)*”

<Chairperson: Prof. Shiorh Futaki>

14:15 - 14:40 **Prof. Insung Choi** (KAIST)
IL-19 “*Artificial Spores: Cytocompatible Encapsulation of Individual Living-Cells*”

<Chairperson: Prof. Yoshinobu Baba>

14:40 - 15:05 **Prof. Bengang Xing** (Nanyang Technological University)
IL-20 “*Strategies towards Optical Imaging and Photo-Inactivation of Drug Resistant Bacteria*”

<Chairperson: Prof. Yoshinobu Baba>

15:05 - 15:30 **Prof. Jin-Soo Kim** (Seoul National University)
IL-21 “*Precision Genome Engineering with Programmable Nucleases and Nickases*”

15:30 - 15:50 Coffee break

<Chairperson: Prof. Itaru Hamachi>

15:50 - 16:15 **Prof. Zhihong Guo** (The Hong Kong University of Science and Technology)
IL-22 “*Differentiation of Solvation Effect and Macromolecular Crowding Effect*”

<Chairperson: Prof. Kazuya Kikuchi>

16:15 - 16:40 **Prof. Dal-Hee Min** (Seoul National University)
IL-23 “*Biomedical Applications of Graphene Derivatives*”

<Chairperson: Prof. Kazuya Kikuchi>

16:40 - 17:05 **Prof. Minoru Ueda** (Tohoku University)
IL-24 “*Chemical Biology of Glycoside Natural Products*”

17:15 - 19:00 **Beach Barbecue (Discussion Time)**

July 6 (Friday)

Session 5 Glycan/Lipid; Biofunctional Molecules and Materials

- 10:00 - 10:25
IL-25 <Chairperson: Prof. Keigo Aoi>
Prof. Toshinori Sato (Keio University)
“*Glycomics Using Saccharide Primer Method*”
- 10:25 - 10:50
IL-26 <Chairperson: Prof. Katsunori Tanaka>
Prof. Shang-Cheng Hung (Academia Sinica)
“*Total Synthesis of Mycobacterial Mycothiol*”
- 10:50 - 11:05 **Coffee break**
- 11:05 - 11:30
IL-27 <Chairperson: Prof. Yukari Fujimoto>
Prof. Shih-Hsiung Wu (Academia Sinica)
“*Structural Determination and Biological Functions of Biomolecules from Taiwan Indigenous Microorganisms*”
- 11:30 - 11:55
IL-28 <Chairperson: Prof. Yoshiko Miura>
Prof. Chun-Cheng Lin (National Tsing-Hua University)
“*Functionalized Nanoparticle for Protein Enrichment and Cell Targeting*”
- 11:55 - 12:20
IL-29 <Chairperson: Prof. Toshinori Sato >
Prof. Kazunari Akiyoshi (Kyoto University)
“*Proteoliposome Engineering for Biomedical Application*”
- 12: 20 - 12:30 **Closing Remarks**
Prof. Hisakazu Mihara (Tokyo Institute of Technology)