

## Poster Presentations

P-(odd numbers): October 29, 17:00–17:45, and October 30, 15:40–16:25

P-(even numbers): October 29, 17:45–18:30, and October 30, 16:25–17:10

**P-001 A practical approach to the stereoselective synthesis of Leu-Asp-type chloroalkene dipeptide isostere utilizing allylic alkylation via remote asymmetric induction**

Mio Takeda<sup>1</sup>, Daichi Toyama<sup>1</sup>, Chihiro Iio<sup>2</sup>, Junko Fujimoto<sup>3</sup>, Kohei Sato<sup>1,3</sup>, Nobuyuki Mase<sup>1,3</sup>, Tetsuo Narumi<sup>1,2,3</sup> (<sup>1</sup>Graduate School of Integrated Science and Technology, Shizuoka University, <sup>2</sup>Graduate School of Medical Photonics, Shizuoka University, <sup>3</sup>Faculty of Engineering, Shizuoka University)

**P-002 An *N*-ortho-nitrobenzylated benzanilide amino acid enables control of the conformation and membrane permeability of cyclic peptides**

Yuko Otani<sup>1</sup>, Asami Ichinose<sup>1</sup>, Xihong Wang<sup>1</sup>, Zhihan Huang<sup>1</sup>, Akitomo Kasahara<sup>1</sup>, Mayumi Ishii<sup>1</sup>, Eri Watanabe<sup>1</sup>, Kayoko Kanamitsu<sup>1</sup>, Kempei Tai<sup>1</sup>, Hiroyuki Kusuhara<sup>1</sup>, Takumi Ueda<sup>1,2</sup>, Koh Takeuchi<sup>1</sup>, Tomohiko Ohwada<sup>1</sup> (<sup>1</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo, <sup>2</sup>Graduate School of Pharmaceutical Sciences, Osaka University)

**P-003 Chemical modification at the N-terminus of aminoacyl-tRNA and synthesis of *N*-myristoylated peptides using *in vitro* translation system**

Hiroki Murakami<sup>1</sup>, Naohiro Terasaka<sup>2</sup>, Haruo Aikawa<sup>1</sup>, Hiroaki Suga<sup>1</sup> (<sup>1</sup>Graduate School of Science, The University of Tokyo, <sup>2</sup>Earth-Life Science Institute, Institute of Science Tokyo)

**P-004 Complementing stability and affinity of a linear peptidic binder by adapting Retro-Inverso to a peptidic covalent binder**

Koki Matsuzuka, Riku Katsuki, Masumi Taki (Department of Engineering Science, Graduate School of Informatics and Engineering, the University of Electro-Communications (UEC))

**P-005 Conformational analysis of DL-peptides containing valine and cyclic  $\beta$ -amino acid residues**

Minseok Oh, Soo Hyuk Choi (Department of Chemistry, Yonsei University)

**P-006 Construction of  $\beta$ -hairpin peptides based on dynamic imine bonds**

Harunori Honda<sup>1</sup>, Takahiro Nakama<sup>1</sup>, Makoto Fujita<sup>1,2,3</sup> (<sup>1</sup>Graduate School of Engineering, The University of Tokyo, <sup>2</sup>UTIAS, The University of Tokyo, <sup>3</sup>Institute for Molecular Science)

**P-007 Design of antifungal peptides (AFPs) based on non-helical  $\alpha/\beta$ -peptide backbones**

ChaeNa Lim, Soo Hyuk Choi (Department of Chemistry, Yonsei University)

**P-008 Development of  $\alpha$ -helical peptides using five-membered  $\alpha$ -carbocyclic  $\alpha,\alpha$ -disubstituted  $\alpha$ -amino acids for side chain cross-linking**

Haruka Adachi<sup>1</sup>, Atsushi Ueda<sup>2</sup>, Akihiro Iyoshi<sup>2</sup>, Yosuke Demizu<sup>3</sup>, Masakazu Tanaka<sup>2</sup> (<sup>1</sup>School of Pharmaceutical Sciences, Nagasaki University, <sup>2</sup>Graduate School of Biomedical Sciences, Nagasaki University, <sup>3</sup>Division of Organic Chemistry, National Institute of Health Sciences)

- P-009 Diastereoselective synthesis of chloroalkene dipeptide isostere containing  $\alpha,\alpha$ -disubstituted amino acid utilizing copper-catalyzed allylic alkylation**
- Harui Miyata<sup>1</sup>, Yui Suruga<sup>2</sup>, Sayuri Takeo<sup>3</sup>, Kohei Sato<sup>1,2</sup>, Nobuyuki Mase<sup>1,2</sup>, Tetsuo Narumi<sup>1,2,3</sup>  
(<sup>1</sup>Graduate School of Integrated Science and Technology, Shizuoka University, <sup>2</sup>Faculty of Engineering, Shizuoka University, <sup>3</sup>Graduate School of Medical Photonics, Shizuoka University)
- P-010 Drug-likeness of cyclic peptides beyond rule of 5**
- Shojiro Shinohara, Mikimasa Tanada, Yuya Morita, Kazuhiko Nakano, Takuya Shiraiishi, Hitoshi Iikura  
(Research Division, Chugai Pharmaceutical Co. Ltd.)
- P-011 Investigation on the effects of stereochemistry on the temperature-dependent self-assembly ability of elastin-like peptides (FPGVG) by substituting L-amino acids for D-amino acids**
- Elissa Mai<sup>1</sup>, Keitaro Suyama<sup>2</sup>, Takeru Nose<sup>1,2</sup> (<sup>1</sup>Department of Chemistry, Faculty and Graduate School of Science, Kyushu University, <sup>2</sup>Faculty of Arts and Science, Kyushu University)
- P-012 Regulated formation of gold nanoparticles by fiber-forming designed peptide**
- Chisato Yamawake, Atsuo Tamura (Graduate School of Science and Technology, Kobe University)
- P-013 Stimulus-responsive conformational control and self-assembly of artificial peptides utilizing benzyl protecting groups**
- Jiameng Liu<sup>1</sup>, Shohei Ishikawa<sup>2</sup>, Takamasa Sakai<sup>2</sup>, Yuko Otani<sup>1</sup>, Tomohiko Ohwada<sup>1</sup> (<sup>1</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo, <sup>2</sup>Graduate School of Engineering, The University of Tokyo)
- P-014 Synthesis and characterization of mitochondria transfer signal peptide derivatives that induce cancer cell death**
- Soshin Saita<sup>1</sup>, Masayuki Yamasaki<sup>2</sup>, Kin-ya Tomizaki<sup>1</sup> (<sup>1</sup>Department of Materials Chemistry, Ryukoku University, <sup>2</sup>Department of Food Sciences and Human Nutrition, Ryukoku University)
- P-015 Synthesis of  $\beta$ -mercaptoglutamic acid derivative and its application to protein synthesis**
- Teppei Miwa<sup>1</sup>, Junpei Abe<sup>1</sup>, Yuta Maki<sup>1,2</sup>, Ryo Okamoto<sup>1,2</sup>, Kohtaro Hirao<sup>1,2</sup>, Yasuhiro Kajihara<sup>1,2</sup>  
(<sup>1</sup>Graduate School Science, Osaka University, <sup>2</sup>FRC, Graduate School Science, Osaka University)
- P-016 Total synthesis and analysis of deamidated  $\beta$ 2-microglobulin**
- Ryuji Kawakami, Toshiki Takei, Toshifumi Takao, Hironobu Hojo (Institute for Protein Research, Osaka University)
- P-017 Efficient method development on synthetic peptide and its impurities**
- Shinichi Fujisaki, Hidetoshi Terada (Shimadzu Corporation)
- P-018 Exploring the bioactive potential of peptide natural products by enhancing cell-membrane permeability**

Kohei Kaneda, Kaito Suzuki, Tomoya Ogura, Fumihito Hasebe, Chitose Maruyama, Yoshimitsu Hamano  
(Graduate School of Bioscience and Biotechnology, Fukui Prefectural University)

**P-019 Identification and molecular characterization of isoforms of gibberellin-regulated protein from Japanese cedar**

Manaka Suzuki<sup>1</sup>, Ami Hanaoka<sup>1</sup>, Ichiho Yoshikawa<sup>1</sup>, Mami Shindo<sup>1</sup>, Keiko Momma<sup>2</sup>, Hiroshi Narita<sup>2</sup>,  
Tatsuya Arai<sup>1</sup>, Tomoyasu Aizawa<sup>1</sup> (<sup>1</sup>Laboratory of Protein Science, Graduate School of Life Science,  
Hokkaido University, <sup>2</sup>Department of Food Science, Kyoto Women's University)

**P-020 Isolation of novel actinoporin-like toxins from the order Antipatharia (black corals)**

Tomohiro Honma<sup>1</sup>, Takushi Shimomura<sup>2</sup>, Yoshihiro Kubo<sup>2</sup>, Ayumi Sasaki<sup>3</sup>, Sota Hoshi<sup>4</sup>, Hiroshi Nagai<sup>4</sup>  
(<sup>1</sup>Department of Marine Biology and Sciences, School of Biological Sciences, Tokai University,  
<sup>2</sup>Division of Biophysics and Neurobiology, National Institute for Physiological Sciences, <sup>3</sup>Medical  
Science College Office, Tokai University, <sup>4</sup>Department of Marine Sciences, Tokyo University of Marine  
Science and Technology)

**P-021 Structural characterisation of a cysteine-rich conotoxin, S-sigma-GVIIIa extracted from the defensive venom of the marine cone snail *Conus geographus***

Yoshimi Peck<sup>1</sup>, David T. Wilson<sup>1</sup>, Danica Lennox-Bulow<sup>1</sup>, Julien Giribaldi<sup>2</sup>, Jamie Seymour<sup>1</sup>, Sebastien  
Dutertre<sup>2</sup>, Johan Rosengren<sup>3</sup>, Michael J. Liddell<sup>4</sup>, Norelle L. Daly<sup>1</sup> (<sup>1</sup>Australian Institute of Tropical  
Health and Medicine, James Cook University, <sup>2</sup>IBMM, University of Montpellier, <sup>3</sup>School of Biomedical  
Sciences, The University of Queensland, <sup>4</sup>College of Science and Engineering, James Cook University)

**P-022 Structural determination of a disulfide-rich peptide in the venom of the scorpion *Buthacus leptochelys***

Kentaro Kojima, Masato Tanaka, Sayaka Tamaki, Yoshiaki Nakagawa, Masahiro Miyashita (Graduate  
School of Agriculture, Kyoto University)

**P-023 Synthesis and structural analysis of NICOL with O-linked glycosylation**

Kenta Nagahama<sup>1</sup>, Shun Ito<sup>3</sup>, Toshiki Takei<sup>1</sup>, Toshifumi Takao<sup>1</sup>, Daiji Kiyozumi<sup>1,2</sup>, Hironobu Hojo<sup>1</sup>  
(<sup>1</sup>Institute for Protein Research, Osaka University, <sup>2</sup>National Institute for Basic Biology, Inter-University  
Research Institute Corporation, <sup>3</sup>Nakamura Gakuen University)

**P-024 A novel convergent approach for long chain peptides**

Sunil Kumar Gandavadi, P. Shaik Shavali, Kalesha Shaik, Sharadsrikar Venkatesan Kotturi (Neuland  
Laboratories Ltd. R&D Center)

**P-025 A novel selenocysteine protecting group for Fmoc solid-phase peptide synthesis**

Fumika Yoshitomi<sup>1</sup>, Koki Nakatsu<sup>1</sup>, Gosuke Hayashi<sup>1</sup>, Hiroshi Murakami<sup>1,2</sup> (<sup>1</sup>Graduate school of  
Engineering, Nagoya University, <sup>2</sup>Institute of Nano-Life-Systems)

**P-026 Amide bond formation using recyclable bicyclic benziodazolone and triarylphosphine**

Daigo Uehara<sup>1</sup>, Sota Adachi<sup>2</sup>, Akira Tsubouchi<sup>1</sup>, Yohei Okada<sup>2</sup>, Viktor V. Zhdankin<sup>3</sup>, Akira Yoshimura<sup>4</sup>,  
Akio Saito<sup>1</sup> (<sup>1</sup>Division of Applied Chemistry, Institute of Engineering, Tokyo University of Agriculture

and Technology, <sup>2</sup>Department of Applied Biological Science, Tokyo University of Agriculture and Technology, <sup>3</sup>Department of Chemistry and Biochemistry, University of Minnesota, <sup>4</sup>Faculty of Pharmaceutical Sciences, Aomori University)

**P-027 Aqueous microwave assisted solid-phase peptide synthesis using nano assemblies of Fmoc-amino acids**

Kirara Mizoguchi<sup>1</sup>, Keiko Hojo<sup>1,2</sup>, Yuichiro Oki<sup>1</sup>, Kazuhito Hioki<sup>1,2</sup>, Munetaka Kunishima<sup>1,2</sup> (<sup>1</sup>Faculty of Pharmaceutical Sciences, Kobe Gakuin University, <sup>2</sup>Cooperative Research Center of Life, Kobe Gakuin University)

**P-028 Chemical protein synthesis via peptide ligation on nucleic acid scaffold**

Sae Suzuki<sup>1</sup>, Shingo Mizushima<sup>1</sup>, Yukino Takeuchi<sup>1</sup>, Gosuke Hayashi<sup>1</sup>, Hiroshi Murakami<sup>1,2</sup> (<sup>1</sup>Graduate School of Engineering, Nagoya University, <sup>2</sup>Institute of Nano-Life-Systems, Institute of Innovation for Future Society, Nagoya University)

**P-029 Convenient amidation using *N*-methyl aminophosphonium salts**

Natsuru Hiraguri, Aki Kohyama, Kiyosei Takasu (Graduate School of Pharmaceutical Science, Kyoto University)

**P-030 Design and synthesis of mini-erythropoietin**

Kazuki Mitsusada<sup>1</sup>, Kohtaro Hirao<sup>1,2</sup>, Yuta Maki<sup>1,2</sup>, Ryo Okamoto<sup>1,2</sup>, Ayano Satoh<sup>3</sup>, Yasuhiro Kajihara<sup>1,2</sup> (<sup>1</sup>Department of Chemistry, Graduate School of Science, Osaka University, <sup>2</sup>FRC, Graduate School of Science, Osaka University, <sup>3</sup>Graduate School of Interdisciplinary Science and Engineering in Health Systems, Okayama University)

**P-031 Development of a synthetic methodology to obtain both epimers of  $\alpha$ -indolylglycine-containing peptide in one step**

Rui Shiozawa, Kana Masui, Tsubasa Inokuma, Ken-ichi Yamada (Department of Pharmaceutical Sciences, Tokushima University)

**P-032 Development of desulfurative borylation for the conversion of cysteine in peptides**

Kohei Yamada, Jeongsu Lee, Kazuhiro Yamashita, Yui Hiranaka, Kim Minjae, Hayato Sasamoto, Daiki Fukue, Taishi Ichinose, Manaka Maeda, Honami Matsumoto, You Nonaka, Yasuchika Yamaguchi (Faculty of Pharmaceutical Sciences, Nagasaki International University)

**P-033 Development of rapid flow-based glycopeptide synthesis**

Shintaro Yamaguchi<sup>1</sup>, Yuta Maki<sup>1,2</sup>, Ryo Okamoto<sup>1,2</sup>, Bradley L. Pentelute<sup>3</sup>, Yasuhiro Kajihara<sup>1,2</sup> (<sup>1</sup>Graduate School Science, Osaka University, <sup>2</sup>Forefront Research Center, Graduate School Science, Osaka University, <sup>3</sup>Department of Chemistry, Massachusetts Institute of Technology)

**P-034 Improved electrochemical peptide synthesis applicable to sterically hindered amino acids**

Shingo Shinjo-Nagahara, Yohei Okada, Goki Hiratsuka, Yoshikazu Kitano, Kazuhiro Chiba (Department of Applied Biological Science, Tokyo University of Agriculture and Technology)

- P-035 Investigation on mechanism and regioselectivity of peptide *N*-chlorination**  
Hikari Sada, Takayuki Watanabe, Takeshi Nanjo, Yoshiji Takemoto (Graduate School of Pharmaceutical Sciences, Kyoto University)
- P-036 Microflow synthesis of C-terminal-free sterically hindered specialty peptides**  
Hinata Dosaki, Chen Ting-Ho, Shinichiro Fuse (Department of Basic Medicinal Sciences, Graduate School of Pharmaceutical Sciences, Nagoya University)
- P-037 One-pot synthesis of diselenide analog of lectin PhoSL by consecutive diselenide-selenoester ligation**  
Masaki Nagashima, Masayuki Izumi (Department of Chemistry and Biotechnology, Faculty of Science and Technology, Kochi University)
- P-038 Peptide thioester and protein synthesis via efficient diketopiperazine formation using  $\alpha$ -methylcysteine**  
Genki Nakamura<sup>1</sup>, Koki Nakatsu<sup>1</sup>, Gosuke Hayashi<sup>1</sup>, Hiroshi Murakami<sup>1,2</sup> (<sup>1</sup>Graduate school of Engineering, Nagoya University, <sup>2</sup>Institute of Nano-Life-Systems, Institute of Innovation for Future Society, Nagoya University)
- P-039 Semisynthesis of O-glycosylated human interleukin-2 by novel peptide ligation**  
Jiusi Fang<sup>1</sup>, Yanbo Liu<sup>1</sup>, Yuta Maki<sup>1,2</sup>, Ryo Okamoto<sup>1,2</sup>, Yasuhiro Kajihara<sup>1,2</sup> (<sup>1</sup>Department of Chemistry, Osaka University, <sup>2</sup>FRC, Graduate School of Science, Osaka University)
- P-040 Synthesis of  $\beta$ -thiolated tyrosine derivative for expanded ligation-desulfurization strategy**  
Takumi Ishida<sup>1</sup>, Kohei Sato<sup>1,2</sup>, Tetsuo Narumi<sup>1,2</sup>, Nobuyuki Mase<sup>1,2</sup>, E. James Petersson<sup>3</sup> (<sup>1</sup>Graduate School of Integrated Science and Technology, Shizuoka University, <sup>2</sup>Research Institute of Green Science and Technology, Shizuoka University, <sup>3</sup>Department of Chemistry, University of Pennsylvania)
- P-041 Thioester hydrolysis under mild conditions using 2-mercaptophenylboronic acid**  
Takaya Yamamoto<sup>1</sup>, Yuta Hori<sup>2</sup>, Masaya Denda<sup>3</sup>, Tetsuo Narumi<sup>1,4</sup>, Yasuteru Shigeta<sup>2</sup>, Akira Otaka<sup>3</sup>, Nobuyuki Mase<sup>1,4</sup>, Kohei Sato<sup>1,4</sup> (<sup>1</sup>Graduate School of Integrated Science and Technology, Shizuoka University, <sup>2</sup>Center for Computational Sciences, University of Tsukuba, <sup>3</sup>Institute of Biomedical Sciences and Graduate School of Pharmaceutical Sciences, Tokushima University, <sup>4</sup>Research Institute of Green Science and Technology, Shizuoka University)
- P-042 Antimicrobial activity and lipopolysaccharide binding activity of polymyxin B<sub>3</sub> derivatives substituted for 2,4-diaminobutyric acid residues with hydroxy amino acids**  
Yuki Sato<sup>1</sup>, Naoki Sakura<sup>2</sup>, Masakazu Miura<sup>1</sup>, Keiichi Ohshima<sup>2</sup> (<sup>1</sup>Faculty of Pharmaceutical Sciences, Hokuriku University, <sup>2</sup>Medical Genetics Division, Shizuoka Cancer Center Research Institute)
- P-043 Conformational study of synthetic partial peptides designed from classical swine fever virus core protein based on CD spectroscopic analysis**  
Hinata Tanaka, Hiroyuki Oku (Division of Molecular Science, Graduate School of Science & Technology, Gunma University)

**P-044** *De novo* design of membrane-disruptive antimicrobial peptides with  $\beta$ -hairpin structure based on electrophysiological analysis

Yuki Hagiri, Ryuji Kawano (Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology)

**P-045** *De novo* design, synthesis, and assessment of amphiphilic  $\beta$ -helical peptide containing unnatural amino acids for nanopore formation

Haruto Nakajima<sup>1</sup>, Daisuke Sato<sup>1</sup>, Zugui Peng<sup>2</sup>, Fumihiro Kayamori<sup>3</sup>, Kenji Usui<sup>3</sup>, Ryuji Kawano<sup>2</sup>, Izuru Kawamura<sup>1</sup> (<sup>1</sup>Graduate School of Engineering Science, Yokohama National University, <sup>2</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, <sup>3</sup>Faculty of Frontiers of Innovative Research in Science and Technology, Konan University)

**P-046** *De novo*-design, synthesis, and evaluation of amphiphilic  $\beta$ -helical peptide aimed to nanopore sensing application

Daisuke Sato<sup>1</sup>, Haruto Nakajima<sup>1</sup>, Zugui Peng<sup>2</sup>, Fumihiro Kayamori<sup>3</sup>, Kenji Usui<sup>3</sup>, Ryuji Kawano<sup>2</sup>, Izuru Kawamura<sup>1</sup> (<sup>1</sup>Graduate School of Engineering Science, Yokohama National University, <sup>2</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, <sup>3</sup>Faculty of Frontiers of Innovative Research in Science and Technology, Konan University)

**P-047** Design, synthesis, and analysis of amphiphilic  $\alpha$ -helix peptide SLY23 for improved interaction with lipid bilayers

Keiya Saito<sup>1</sup>, Daisuke Sato<sup>1</sup>, Zugui Peng<sup>2</sup>, Ryuji Kawano<sup>2</sup>, Izuru Kawamura<sup>1</sup> (<sup>1</sup>Graduate School of Engineering Science, Yokohama National University, <sup>2</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology)

**P-048** Development of helix-forming  $\alpha/\delta$ -heteropeptides using cyclopropane to control backbone conformation

Megumi Watanabe<sup>1</sup>, Nanase Ochiai<sup>1</sup>, Hiroyuki Kumeta<sup>2</sup>, Makoto Nagata<sup>1</sup>, Marin Yokomine<sup>3</sup>, Jumpei Morimoto<sup>3</sup>, Shinsuke Sando<sup>3</sup>, Masanori Nagatomo<sup>1</sup>, Koh Takeuchi<sup>4</sup>, Satoshi Shuto<sup>1</sup>, Mizuki Watanabe<sup>1</sup> (<sup>1</sup>Faculty of Pharmaceutical Sciences, Hokkaido University, <sup>2</sup>Faculty of Advanced Life Science, Hokkaido University, <sup>3</sup>Graduate School of Engineering, The University of Tokyo, <sup>4</sup>Graduate School of Pharmaceutical Sciences, The University of Tokyo)

**P-049** Development of turn-forming short linear peptides using cyclopropane to control backbone conformation

Nobuki Okuyama<sup>1</sup>, Hiroyuki Kumeta<sup>2</sup>, Yuki Yamazaki<sup>1</sup>, Wataru Kido<sup>1</sup>, Masanori Nagatomo<sup>1</sup>, Satoshi Shuto<sup>1</sup>, Mizuki Watanabe<sup>1</sup> (<sup>1</sup>Faculty of Pharmaceutical Sciences, Hokkaido University, <sup>2</sup>Faculty of Advanced Life Science, Hokkaido University)

**P-050** Discovery of CBX7 inhibitors through the construction and screening of a peptide library

Yuri Takada, Ibuki Yamazaki, Yasunobu Yamashita, Yukihiro Itoh, Takayoshi Suzuki (SANKEN, Osaka University)

- P-051 Evaluation of secondary structure and membrane permeability by introducing disubstituted amino acids into amphipathic helical peptide C18AA**
- Takuma Kato, Go Ofuka, Ryota Kobayashi, Akiko Asano, Mitsunobu Doi (Faculty of Pharmacy, Osaka Medical and Pharmaceutical University)
- P-052 Fabrication of peptidyl resins with a photocleavable linker for construction of nanopore-forming peptide library**
- Fumihiko Kayamori<sup>1</sup>, Takuto Kariya<sup>1</sup>, Zugui Peng<sup>2</sup>, Izuru Kawamura<sup>3</sup>, Ryuji Kawano<sup>2</sup>, Kenji Usui<sup>1</sup>  
(<sup>1</sup>Faculty of Frontiers of Innovative Research in Science and Technology, Konan University,  
<sup>2</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology,  
<sup>3</sup>Graduate School of Engineering Science, Yokohama National University)
- P-053 Functional analyses of “ASFV\_G\_ACD” ORFs in ASFV strain Georgia 2007/1**
- Yuxue Niu<sup>1</sup>, Hayato Masutani<sup>1</sup>, Shiho Saito<sup>1</sup>, Peng Lu<sup>1</sup>, Ken Okamoto<sup>1</sup>, Suguru Okuda<sup>1</sup>, Michio Suzuki<sup>1</sup>, Takato Takenouchi<sup>2</sup>, Tomoya Kitamura<sup>3</sup>, Kentaro Masujin<sup>3</sup>, Takehiro Kokuho<sup>3</sup>, Hideaki Itoh<sup>1</sup>, Koji Nagata<sup>1</sup> (<sup>1</sup>Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, <sup>2</sup>Institute of Agrobiological Sciences, National Agriculture and Food Research Organization (NARO), <sup>3</sup>African Swine Fever Unit, National Institute of Animal Health, National Agriculture and Food Research Organization (NARO))
- P-054 Growth stimulation of *E. coli* in stationary phase by coiled-coil analogues**
- Ryutarō Tatei, Koudai Ueno, Yuna Nunokawa, Rui Kamada, Natsumi Nakagawa, Kazuyasu Sakaguchi (Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University)
- P-055 Impact of position and type of halogen atom in the tryptophan residue of curacomycin on its antibacterial activity**
- Yudai Nishikawa, Minoru Inagaki, Yuichi Masuda (Graduate School of Bioresources, Mie University)
- P-056 Infrared analysis of the Ca<sup>2+</sup>-binding site II of T-plastin: Effect of amino-acid replacements on the Ca<sup>2+</sup>-coordination structure**
- Masayuki Nara<sup>1</sup>, Hisayuki Morii<sup>1</sup>, Takuya Miyakawa<sup>2</sup>, Hiroyuki Kagi<sup>3</sup>, Masaru Tanokura<sup>4</sup> (<sup>1</sup>Liberal Arts and Sciences Division, Tokyo Medical and Dental University (TMDU), <sup>2</sup>Graduate School of Biosciences, University of Kyoto, <sup>3</sup>Graduate School of Science, University of Tokyo, <sup>4</sup>Graduate School of Agricultural and Life Sciences, University of Tokyo)
- P-057 Interaction analysis of boron clusters and peptide**
- Shintaro Sakamoto<sup>1</sup>, Yoshihide Hattori<sup>3</sup>, Taichi Shirakawa<sup>1</sup>, Yoshiaki Hirano<sup>1,2</sup> (<sup>1</sup>Faculty of Chemistry, Materials and Bioengineering, Kansai University, <sup>2</sup>KUMP Research Center, Kansai University, <sup>3</sup>Research Center for BNCT, Osaka Metropolitan University)
- P-058 Intramolecular hydrogen-bondings of boron-containing trimer azapeptides**

Yudai Oshino<sup>1</sup>, Hiroto Oikawa<sup>1</sup>, Ryota Fujisawa<sup>1</sup>, Kota Miyata<sup>1</sup>, Makoto Roppongi<sup>2</sup>, Toru Oba<sup>1</sup>  
(<sup>1</sup>Department of Applied Chemistry, Faculty of Engineering, Utsunomiya University, <sup>2</sup>Center for Instrumental Analysis, Utsunomiya University)

**P-059 Investigate of amino acid sequence dependence of cell aggregation inducing peptide**

Hiroaki Kadobayashi<sup>1</sup>, Yuya Sugiyama<sup>3</sup>, Eitaro Matsumura<sup>3</sup>, Yuto Naruse<sup>3</sup>, Satoshi Kishimoto<sup>3</sup>, Yoshiaki Hirano<sup>1,2</sup> (<sup>1</sup>Faculty of Chemistry, Materials and Bioengineering, Kansai University, <sup>2</sup>KUMP Resarch Center, Kansai University, <sup>3</sup>API Corporation)

**P-060 Investigation of the antimicrobial activity and cell viability of Trp substituted and Trp-Pro-Arg extended myticalin A6 (3–23)-OH derivatives**

Keiko Okimura, Tatsuo Takahashi, Miho Kajino, Kana Kamiya, Fuka Wakata, Takuma Kyogaku, Tohru Daikoku (Faculty of Pharmaceutical Sciences, Hokuriku University)

**P-061 Investigation of the effect of conformational rigidity on passive membrane permeability of peptides**

Ayumi Inayoshi<sup>1</sup>, Mariko Akiba<sup>1</sup>, Marin Yokomine<sup>1</sup>, Koji Umezawa<sup>2,3</sup>, Jumpei Morimoto<sup>1</sup>, Shinsuke Sando<sup>1</sup> (<sup>1</sup>Graduate School of Engineering, The University of Tokyo, <sup>2</sup>Graduate School of Science and Technology, Shinshu University, <sup>3</sup>Institute for Biomedical Sciences, Shinshu University)

**P-062 Protein-protein interaction analysis of crustacean molt-inhibiting hormone and its putative receptors**

Yunqing Ji<sup>1</sup>, Hideaki Itoh<sup>1</sup>, Ken Okamoto<sup>1</sup>, Suguru Okuda<sup>1</sup>, Koji Nagata<sup>1,2,3</sup> (<sup>1</sup>Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Science, The University of Tokyo, <sup>2</sup>Agricultural Bioinformatics Research Unit, Graduate School of Agricultural and Life Science, The University of Tokyo, <sup>3</sup>Research Center for Food Safety, Graduate School of Agricultural and Life Science, The University of Tokyo)

**P-063 Stability and hetero-oligomerization in p53 family tetramerization domain during vertebrate evolution**

Natsumi Nakagawa<sup>1</sup>, Shuya Sakaguchi<sup>1</sup>, Rui Kamada<sup>1</sup>, James G. Omichinski<sup>2</sup>, Kazuyasu Sakaguchi<sup>1</sup> (<sup>1</sup>Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University, <sup>2</sup>Department of Biochemistry and Molecular Medicine, University of Montreal)

**P-064 Structure-activity relationship studies of novel SARS-CoV-2 papain-like protease inhibitors and their application as anti-Mpox agents**

Kouki Shinohara<sup>1</sup>, Takuya Kobayakawa<sup>1</sup>, Yuki Takamatu<sup>2</sup>, Kohei Tsuji<sup>1</sup>, Hiroaki Mitsuya<sup>2,3,4</sup>, Hirokazu Tamamura<sup>1</sup> (<sup>1</sup>Institute of Biomaterials and Bioengineering, Institute of Science Tokyo, <sup>2</sup>National Center for Global Health and Medicine Research Institute, <sup>3</sup>Experimental Retrovirology Section, HIV and AIDS Malignancy Branch, National Cancer Institute, National Institutes of Health, <sup>4</sup>Kumamoto University Hospital)

**P-065 Synthesis and functional analysis of peptide fragments of selenoprotein P containing ten seleno-cysteine residues**



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**P-066 Systematic investigation of metal ion-triggered self-assembly of amphiphilic peptides with chelate moieties**

Minako Nishimura, Jumpei Shiota, Hiroshi Tsutsumi (School of Life Science and Technology, Tokyo Institute of Technology)

**P-067 The biological activities of the joining peptides of proopiomelanocortin**

Kyona Hiroshima, Nana Sakata, Tadafumi Konogami, Yohei Oda, Rikako Hyuga, Shigeru Shimamoto, Yuji Hidaka (Graduate School of Science and Engineering Research, Kindai University)

**P-068 A potent peptidic inhibitor of measles virus infection discovered via derivatization of a fusion inhibitor peptide**

Jumpei Morimoto<sup>1</sup>, Gao Ziwei<sup>1</sup>, Jiei Sasaki<sup>2</sup>, Tateki Suzuki<sup>2</sup>, Shinsuke Sando<sup>1</sup>, Takao Hashiguchi<sup>2</sup> (<sup>1</sup>Graduate School of Engineering, The University of Tokyo, <sup>2</sup>Institute for Life and Medical Sciences, Kyoto University)

**P-069 Acquisition of specific neutralizing antibodies against mouse mitocryptide-14 for the elucidation of its regulatory mechanisms in innate immune responses**

Naoki Iwata, Hiroki Morikawa, Yoshito Takamuro, Takenori Yamada, Yoshiaki Kiso, Hidehito Mukai (Laboratory of Peptide Science, Graduate School of Bio-Science, Nagahama Institute of Bio-Science and Technology)

**P-070 Alanine scanning revealed key charged amino acid residues of A $\beta$ 40 affecting its fibril formation and cytotoxicity**

Atsushi Tanaka, Kenichi Kawano, Katsumi Matsuzaki (Graduate School of Pharmaceutical Sciences, Kyoto University)

**P-071 Application of DPP7-targeted dipeptide isopropyl esters to periodontal disease bacteria**

Koushi Hidaka<sup>1</sup>, Yasumitsu Sakamoto<sup>2</sup>, Mizuki Sekiya<sup>2</sup>, Yukari Nonaka<sup>3</sup>, Koichi Tabeta<sup>3</sup>, Akihiro Nakamura<sup>4</sup>, Wataru Ogasawara<sup>4</sup> (<sup>1</sup>Research Facility Center for Science and Technology, Kobe University, <sup>2</sup>School of Pharmacy, Iwate Medical University, <sup>3</sup>Division of Periodontology, Niigata University Graduate School of Medical and Dental Sciences, <sup>4</sup>Department of Science of Technology Innovation, Nagaoka University of Technology)

**P-072 Assessments of cytosolic release efficacy of cell-penetrating peptides in inkjet system**

Sohei Ninomiya<sup>1</sup>, Mika Omura<sup>2</sup>, Ikuhiko Nakase<sup>1,2</sup> (<sup>1</sup>College of Life, Environment, and Advanced Sciences, Osaka Prefecture University, <sup>2</sup>Graduate School of Science, Osaka Metropolitan University)

**P-073 Conjugation of human N-glycans improves the drug properties of existing peptides and proteins**

Hirofumi Ochiai<sup>1</sup>, Sofia Elouali<sup>1</sup>, Takahiro Yamamoto<sup>1</sup>, Masato Noguchi<sup>1</sup>, Yuji Nishiuchi<sup>1,2</sup> (<sup>1</sup>GlyTech, Inc., <sup>2</sup>Graduate School of Science, Tohoku University)

**P-074 Development of antibody mimetic protein to detect alzheimer's disease-related phosphorylated tau**

Yusei Koie<sup>1</sup>, Tamaki Kobayashi<sup>1</sup>, Yuto Tashiro<sup>1</sup>, Kazuhiro Furukawa<sup>2</sup>, Yoshiro Chuman<sup>1</sup> (<sup>1</sup>Laboratory of Biological Chemistry, Graduate School of Science and Technology, Niigata University, <sup>2</sup>Cell Regulation Laboratory in Biochemistry, Graduate School of Science and Technology, Niigata University)

**P-075 Development of senescent cell-selective peptides by on-bead cell screening**

Riko Oyama<sup>1</sup>, Sota Yamada<sup>1</sup>, Momoka Miyata<sup>1</sup>, Kento Takaya<sup>2</sup>, Kazuo Kishi<sup>2</sup>, Kenjiro Hanaoka<sup>1</sup> (<sup>1</sup>Faculty of Pharmacy, Keio University, <sup>2</sup>School of Medicine, Keio University)

**P-076 Functional Aib-containing CPP with a cleavable cross-linker in the endosomal environment for the delivery of siRNA**

Keita Wakamori, Yutaka Enomoto, Yuzuki Hashikawa, Shun-ichi Wada, Hidehito Urata (Department of Bioorganic Chemistry, Faculty of Pharmacy, Osaka Medical and Pharmaceutical University)

**P-077 Investigation of the signaling mechanisms for mitocryptide-14 derived from the transit signal sequence of single stranded DNA-binding protein**

Ryota Takeuchi, Takayuki Marutani, Ryota Tanemura, Koji Ohura, Shuhei Tsuchiguchi, Yoshiaki Kiso, Hidehito Mukai (Laboratory of Peptide Science, Graduate School of Bio-Science, Nagahama Institute of Bio-Science and Technology)

**P-078 Investigation on degrader peptides targeting the polo-box domain for degradation of polo-like kinase 1**

Xueyuan Huang, Kohei Tsuji, Takuya Kobayakawa, Hirokazu Tamamura (Institute of Biomaterials and Bioengineering, Institute of Science Tokyo)

**P-079 Mitocryptide-2: investigation of its regulatory mechanisms on triggering innate immune responses in sterile tissue injury sites**

Ayumi Kojima, Hakuu Fujiwara, Hayato Katabuchi, Hirokazu Tanaka, Takenori Yamada, Tatuya Hattori, Yoshiaki Kiso, Hidehito Mukai (Laboratory of Peptide Science, Graduate School of Bio-Science, Nagahama Institute of Bio- Science and Technology)

**P-080 Obtaining a cyclic peptide-type covalent binder by reactivity/affinity co-selection**

Koki Oginezawa, Riku Katsuki, Masumi Taki (Graduate School of Informatics and Engineering, the University of Electro-Communications (UEC))

**P-081 Oligopeptide-type hyperpolarized MRI molecular probe for detecting dipeptidyl peptidase-4 activity *in vivo***

Akihito Goto<sup>1</sup>, Hiroyuki Yatabe<sup>1</sup>, Norikazu Koyasu<sup>2</sup>, Kazutoshi Yamamoto<sup>2</sup>, Murali Cherukuri Krishna<sup>2</sup>, Abdelazim Elsayed Elhelaly<sup>3</sup>, Fuminori Hyodo<sup>3</sup>, Masayuki Matsuo<sup>3</sup>, Keita Saito<sup>4</sup>, Yoichi Takakusagi<sup>4,5</sup>, Yutaro Saito<sup>1</sup>, Shinsuke Sando<sup>1</sup> (<sup>1</sup>Graduate School of Engineering, The University of Tokyo, <sup>2</sup>National

Institutes of Health, <sup>3</sup>School of Medicine, Gifu University, <sup>4</sup>National Institutes for Quantum Science and Technology, <sup>5</sup>Graduate School of Science, Chiba University)

**P-082 Peptide-immobilized nanospheres for antibody detection to investigate the history of classical swine fever virus infection in wild boars**

Nana Ishibashi, Hinata Tanaka, Ami Kosugi, Hiroyuki Oku (Division of Molecular Science, Graduate School of Science & Technology, Gunma University)

**P-083 Plasmid DNA delivery using amphipathic helical peptides containing  $\alpha,\alpha$ -disubstituted amino acids**

Motoki Naka<sup>1</sup>, Tomohiro Umeno<sup>1</sup>, Mika Shibuya<sup>2</sup>, Yuto Yamaberi<sup>2</sup>, Atsushi Ueda<sup>2</sup>, Masakazu Tanaka<sup>2</sup>, Hiroyasu Takemoto<sup>1</sup>, Makoto Oba<sup>1</sup> (<sup>1</sup>Graduate School of Medical Science, Kyoto Prefectural University of Medicine, <sup>2</sup>Graduate School of Biomedical Sciences, Nagasaki University)

**P-084 Preparation and screening of peptide libraries using BACE1**

Ryo Watanabe, Yuma Uchida, Masaki Midorikawa, Reo Yamada, Taeko Kakizawa (College of Science and Engineering, Kanto Gakuin University)

**P-085 Preparation of lysine-specific demethylase 1 inhibitors using modified lysine residues**

Arisa Tatsunami<sup>1</sup>, Ren Inoue<sup>1</sup>, Miho Sekine<sup>2</sup>, Taeko Kakizawa<sup>1,2</sup>, Takayoshi Suzuki<sup>3</sup> (<sup>1</sup>Graduate School of Materials and Life Sciences, Kanto Gakuin University, <sup>2</sup>College of Sciences and Engineering, Kanto Gakuin University, <sup>3</sup>The Institute of Scientific and Industrial Research, Osaka University)

**P-086 Selective anticancer activities of low pH-responsive peptides and activity enhancement by anticancer drug conjugation and cationic liposomes**

Aoi Taniguchi, Kenichi Kawano, Katsumi Matsuzaki (Graduate School of Pharmaceutical Sciences, Kyoto University)

**P-087 Structure–activity relationship study on monobody scaffolds for mirror-image protein therapeutics**

Naoya Iwamoto<sup>1</sup>, Saya Ohno<sup>2</sup>, Kensuke Nakamura<sup>2</sup>, Toshinori Naito<sup>3</sup>, Sayaka Miura<sup>3</sup>, Shinsuke Inuki<sup>1</sup>, Hiroaki Ohno<sup>1</sup>, Gosuke Hayashi<sup>3</sup>, Hiroshi Murakami<sup>3</sup>, Shinya Oishi<sup>1,2</sup> (<sup>1</sup>Graduate School of Pharmaceutical Sciences, Kyoto University, <sup>2</sup>Laboratory of Medicinal Chemistry, Kyoto Pharmaceutical University, <sup>3</sup>Graduate School of Engineering, Nagoya University)

**P-088 A novel ligand–protein binding pair developed by TRAP display**

Shun Umemoto<sup>1</sup>, Tomoki Miyazaki<sup>2</sup>, Koushirou Endo<sup>3</sup>, Nariaki Tsuzuki<sup>1</sup>, Nguyen Kim Chung<sup>1</sup>, Natsumi Fukaya<sup>2</sup>, Tatsuyuki Yoshii<sup>2</sup>, Tomoshige Fujino<sup>1</sup>, Gosuke Hayashi<sup>1</sup>, Tomoya Hino<sup>3</sup>, Shinya Tsukiji<sup>2</sup>, Hiroshi Murakami<sup>1,4</sup> (<sup>1</sup>Graduate School of Engineering, Nagoya University, <sup>2</sup>Graduate School of Engineering, Nagoya Institute of Technology, <sup>3</sup>Graduate School of Engineering, Tottori University, <sup>4</sup>Institute of Nano-Life-Systems, Institutes of Innovation for Future Society, Nagoya University)

**P-089 A PNA-encoding strategy enables synthesis and screening of libraries requiring DNA-damaging reactions**

Jungyeon Kim, Jun Hyung Park, Hyun-Suk Lim (Department of Chemistry and Division of Advanced Materials Science, Pohang University of Science and Technology (POSTECH))

**P-090 A synthetic motif that delivers small molecules and peptides to the inner leaflet of the plasma membrane**

Xiaotong Wang, Shunsuke Sawada, Masaru Yoshikawa, Keita Tsutsui, Shinya Tsukiji (Graduate School of Engineering, Nagoya Institute of Technology)

**P-091 Analysis of interactions of glycopeptides with sugar-recognizing F-box protein FBS2**

Midori Aikyo<sup>1</sup>, Haruka Inoue<sup>1</sup>, Satoshi Takahashi<sup>1</sup>, Nozomi Ishii<sup>1</sup>, Ichiro Matsuo<sup>1</sup>, Yukiko Yoshida<sup>2</sup>, Tadashi Suzuki<sup>3</sup>, Tsuyoshi Takahashi<sup>1</sup> (<sup>1</sup>Graduate School of Science and Technology, Gunma University, <sup>2</sup>Tokyo Metropolitan Institute of Medical Science, <sup>3</sup>RIKEN)

**P-092 Analysis of intracellular behavior using a peptide heterodimer labeled with different fluorescent dyes**

Karen Tanaka<sup>1</sup>, Masayuki Yamasaki<sup>2</sup>, Kin-ya Tomizaki<sup>1</sup> (<sup>1</sup>Department of Materials Chemistry, Ryukoku University, <sup>2</sup>Department of Food Sciences and Human Nutrition, Ryukoku University)

**P-093 Chemical modification of helix-loop-helix peptide: Introduction of acetyllysine analogue by thiol-ene click chemistry**

Kazusa Kimoto, Hina Tanaka, Ruka Yamauchi, Daisuke Fujiwara, Ikuhiko Nakase, Ikuo Fujii (Graduate School of Science, Osaka Metropolitan University)

**P-094 Combination and fusion site of cell penetrating peptides affects protein transportation efficiency**

Akari Miwa, Koki Kamiya (Graduate school of science and technology, Gunma University)

**P-095 Construction of curculary permuted Keap1 and selection of peptides that bind to Keap1 using an engineered split intein**

Kana Nobusawa, Tsuyoshi Takahashi (Graduate School of Science and Technology, Gunma University)

**P-096 Construction of the selection method to identify proteins that bind to peptide sequences**

Momoka Shimizu, Kana Nobusawa, Tsuyoshi Takahashi (Graduate School of Science and Technology, Gunma University)

**P-097 Creation of artificial viral capsid encapsulated G-quadruplex DNA**

Motono Ishii<sup>1</sup>, Hiroshi Inaba<sup>1</sup>, Tamaki Endoh<sup>2</sup>, Hisae Karimata Tateishi<sup>2</sup>, Naoki Sugimoto<sup>2</sup>, Kazunori Matsuura<sup>1</sup> (<sup>1</sup>Graduate School of Engineering, Tottori University, <sup>2</sup>The Frontier Institute for Biomolecular Engineering Research, Konan University)

**P-098 Designing LimF-modifiable His-rich sequences for the production of peptides with accumulated geranylated His residues**

Satoshi Muromachi<sup>1</sup>, Yuchen Zhang<sup>1</sup>, Yuki Goto<sup>2</sup>, Hiroaki Suga<sup>1</sup> (<sup>1</sup>Department of Chemistry, Graduate School of Science, The University of Tokyo, <sup>2</sup>Department of Chemistry, Graduate School of Science, Kyoto University)

**P-099 Development of a double-stapled peptide possessing a reversible disulfide linker to control the helical conformation and bioactivity**

Tetsuya Yasukagawa, Junya Chiba, Yuki Ohishi, Satoru Yokoyama, Yue Zhou, Masahiko Inouye  
(Graduate School of Pharmaceutical Sciences, University of Toyama)

**P-100 Development of activity-based probe to elucidate the activity regulation and localization of 3CL protease in SARS-CoV-2 infected cells**

Yuki Yamauchi<sup>1</sup>, Sho Konno<sup>2</sup>, Noriko Omura<sup>1</sup>, Narumi Yoshioka<sup>2</sup>, Alexandra Hingst<sup>3</sup>, Michael Gütschow<sup>3</sup>, Christa E. Müller<sup>3</sup>, Akihiro Taguchi<sup>2</sup>, Atsuhiko Taniguchi<sup>2</sup>, Atsushi Kawaguchi<sup>4</sup>, Yoshio Hayashi<sup>2,5</sup> (<sup>1</sup>Graduate School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, <sup>2</sup>School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, <sup>3</sup>Pharmaceutical Institute, Pharmaceutical & Medicinal Chemistry, University of Bonn, <sup>4</sup>Institute of Medicine, Transborder Medical Research Center, University of Tsukuba, <sup>5</sup>School of Life Sciences, Tokyo University of Pharmacy and Life Sciences)

**P-101 Development of covalent artificial antibody-tag based on proximity-induced reactivity**

Kim Chung Nguyen<sup>1</sup>, Tomoki Miyazaki<sup>3</sup>, Shinya Tsukiji<sup>3</sup>, Tomoshige Fujino<sup>1</sup>, Gosuke Hayashi<sup>1</sup>, Hiroshi Murakami<sup>1,2</sup> (<sup>1</sup>Graduate School of Engineering, Nagoya University, <sup>2</sup>Institute of Nano-Life-Systems, Institutes of Innovation for Future Society, Nagoya University, <sup>3</sup>Department of Life Science and Applied Chemistry, Graduate School of Engineering, Nagoya Institute of Technology)

**P-102 Development of high-affinity polo-like kinase 1 polo-box domain binding peptides by bivalent approaches**

Kohei Tsuji<sup>1,2</sup>, Xueyuan Huang<sup>1</sup>, Takuya Kobayakawa<sup>1</sup>, Terrence R. Burke, Jr.<sup>2</sup>, Hirokazu Tamamura<sup>1</sup>  
(<sup>1</sup>Institute of Biomaterials and Bioengineering, Institute of Science Tokyo, <sup>2</sup>Chemical Biology Laboratory, Center for Cancer Research, National Cancer Institute, National Institutes of Health)

**P-103 Development of novel monobodies with high sensitivity and affinity for detecting HOIP-PUB domain**

Kiyose Sakai<sup>1</sup>, Keiichiro Kadoba<sup>2</sup>, Atsushi Manabe<sup>2</sup>, Tomoshige Fujino<sup>1</sup>, Gosuke Hayashi<sup>1</sup>, Akio Morinobu<sup>2</sup>, Kazuhiro Iwai<sup>3</sup>, Hiroshi Murakami<sup>1</sup> (<sup>1</sup>Department of Biomolecular Engineering, Graduate School of Engineering, Nagoya University, <sup>2</sup>Department of Rheumatology and Clinical Immunology, Graduate School of Medicine, Kyoto University, <sup>3</sup>Department of Molecular and Cellular Physiology, Graduate School of Medicine, Kyoto University)

**P-104 Development of peptide-based ubiquitin ligase ligands with cell permeability**

Hidetomo Yokoo<sup>1</sup>, Zhou Dongrui<sup>2</sup>, Yosuke Demizu<sup>1,2</sup> (<sup>1</sup>Division of Organic Chemistry, National Institute of Health Sciences, <sup>2</sup>Graduate School of Medical Life Science, Yokohama City University)

**P-105 Development of peptoid nucleic acids and their structural properties**

Sawa Takeda<sup>1,2</sup>, Hidetomo Yokoo<sup>2</sup>, Yosuke Demizu<sup>1,2</sup> (<sup>1</sup>Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, <sup>2</sup>National Institute of Health Sciences)

**P-106 Development of potent UBR1 ligands for targeted protein degradation via the N-degron pathway**

Hee Myeong Wang, Hyun-Suk Lim (Department of Chemistry, Pohang University of Science and Technology (POSTECH))

**P-107 Development of tyrosine footprinting and identification of nucleic acid binding proteins**

Shinichi Sato<sup>1</sup>, Keita Nakane<sup>1</sup>, Takanori Oyoshi<sup>2</sup> (<sup>1</sup>Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, <sup>2</sup>Graduate School of Science and Technology, Shizuoka University)

**P-108 Development of urokinase-type plasminogen activator receptor (uPAR) targeting helix-loop-helix peptides**

Ryoichi Kira, Yuto Nakatani, Masataka Michigami, Ikuhiko Nakase, Ikuo Fujii (Graduate School of Science, Osaka Metropolitan University)

**P-109 Discovery of peptoid ligands using DNA-encoded libraries on nanoparticles**

Minkyung Kim<sup>1</sup>, Soobin Lee<sup>1</sup>, Hyun-Suk Lim<sup>1,2</sup> (<sup>1</sup>Department of Chemistry and Division of Advanced Material Science, Pohang University of Science and Technology (POSTECH), <sup>2</sup>Institute for Convergence Research and Education in Advanced Technology, Yonsei University)

**P-110 Efficient intracellular delivery of PROTAC using cell-penetrating peptides**

Maho Miyamoto<sup>1,2</sup>, Hidetomo Yokoo<sup>2</sup>, Yosuke Demizu<sup>1,2</sup> (<sup>1</sup>Graduate School of Medical Life Science, Yokohama City University, <sup>2</sup>Division of Organic Chemistry, National Institute of Health Sciences)

**P-111 Evaluation of WYP-rich macrocyclic peptide library for selecting high affinity binders**

Taito Higashinagata<sup>1</sup>, Taiga Sumi<sup>1</sup>, Tomoshige Fujino<sup>1</sup>, Hiroshi Murakami<sup>1,2</sup> (<sup>1</sup>Department of Biomolecular Engineering, Graduate School of Engineering, Nagoya University, <sup>2</sup>Institute of Nano-Life-Systems, Institutes of Innovation for Future Society, Nagoya University)

**P-112 Intracellular delivery of messenger RNA by fluoroalkyl chain-modified artificial viral capsid**

Yuka Yamamoto<sup>1</sup>, Hiroto Furukawa<sup>1</sup>, Hiroshi Inaba<sup>1</sup>, Yu Ota<sup>2</sup>, Takashi Okazoe<sup>2</sup>, Kazunori Matsuura<sup>1</sup> (<sup>1</sup>Graduate School of Engineering, Tottori University, <sup>2</sup>Materials Integration Laboratories, AGC Incorporated)

**P-113 Intracellular delivery of nucleic acids via coacervates formed by attenuated cationic amphiphilic lytic peptide trimers**

Yoshimasa Kawaguchi, Ayumi Kikkawa, Shiroh Futaki (Institute for Chemical Research, Kyoto University)

**P-114 Microcontact surface imprinting of affinity peptides for developing a conjugate-free nanozyme-based ELISA platform for marine biotoxin detection**

Chae Hwan Cho, Jong Pil Park (Department of Food Science and Biotechnology, GreenTech-Based Food Safety Research Group (BK21 Four), Chung-Ang University)

**P-115 Novel on/off switchable photosensitizer-peptide conjugate for potent myostatin-selective photoinactivation**

Hideyuki Okamoto<sup>1,2</sup>, Kaoru Ikekawa<sup>2</sup>, Shuko Amber Murano<sup>2</sup>, Jo Yamamoto<sup>2</sup>, Sho Konno<sup>2</sup>, Akihiro Taguchi<sup>2</sup>, Atsuhiko Taniguchi<sup>2</sup>, Yoshio Hayashi<sup>2</sup> (<sup>1</sup>Department of Drug Delivery and Molecular Biopharmaceutics, Tokyo University of Pharmacy and Life Sciences, <sup>2</sup>Department of Medicinal Chemistry, Tokyo University of Pharmacy and Life Sciences)

**P-116 Photoregulation of actin polymerization via spiropyran-modified beta-sheet peptide having lifeact sequence**

Subhajit Guria, Hiroshi Inaba, Kazunori Matsuura (Department of Chemistry and Biotechnology, Graduate School of Engineering, Tottori University)

**P-117 Pnictogen-bonding enzymes**

Giacomo Renno<sup>1,2</sup>, Dongping Chen<sup>2,3</sup>, Qing-Xia Zhang<sup>1,2</sup>, Rosa M. Gomila<sup>4</sup>, Antonio Frontera<sup>4</sup>, Naomi Sakai<sup>1,2</sup>, Thomas R. Ward<sup>2,3</sup>, Stefan Matile<sup>1,2</sup> (<sup>1</sup>Department of Organic Chemistry, University of Geneva, <sup>2</sup>National Centre of Competence in Research (NCCR) Molecular Systems Engineering, <sup>3</sup>Department of Chemistry, University of Basel, <sup>4</sup>Departament de Química, Universitat de les Illes Balears)

**P-118 Development of antibody scaffolds for coacervate formation with attenuated cationic amphiphilic lytic peptide trimers and cytosolic delivery of IgG antibodies**

Megumi Kiyokawa, Yoshimasa Kawaguchi, Shiroh Futaki (Institute for Chemical Research, Kyoto University)

**P-119 Proximity labeling of the substrates of caseinolytic protease P using a photocrosslinking probe**

Takeo Imai<sup>1</sup>, Fumihiko Ishikawa<sup>1</sup>, Naoto Shobayashi<sup>1</sup>, Takehiro Suzuki<sup>2</sup>, Naoshi Dohmae<sup>2</sup>, Genzoh Tanabe<sup>1</sup> (<sup>1</sup>Faculty of Pharmacy, Kindai University, <sup>2</sup>Biomolecular Characterization Unit, RIKEN Center for Sustainable Resource Science)

**P-120 Synthesis and evaluation of astatine-211-labeled agent targeting fibroblast activation protein in cancer**

Takeo Toda<sup>1</sup>, Masayuki Takamatsu<sup>1,2</sup>, Ayaka Aso<sup>1</sup>, Yuichiro Kadonaga<sup>1,3</sup>, Yoshifumi Shirakami<sup>2,3</sup>, Tadashi Watabe<sup>2,3</sup>, Taku Yoshiya<sup>4</sup>, Masayoshi Mochizuki<sup>4</sup>, Kazuhiro Ooe<sup>2</sup>, Atsushi Toyoshima<sup>2</sup>, Jens Cardinale<sup>5</sup>, Frederik Lars Giesel<sup>5</sup>, Kazuko Kaneda-Nakashima<sup>1,6</sup>, Atsushi Shimoyama<sup>1,2,6</sup>, Koichi Fukase<sup>1,2,6</sup> (<sup>1</sup>Graduate School of Science, Osaka University, <sup>2</sup>Institute for Radiation Science, Osaka University, <sup>3</sup>Graduate School of Medicine, Osaka University, <sup>4</sup>Peptide Institute, Inc., <sup>5</sup>University Hospital Düsseldorf, <sup>6</sup>FRC, Graduate School of Science, Osaka University)

**P-121 Synthesis and evaluation of phthalimide type SARS-CoV-2 3CL protease inhibitors**

Hinata Sano<sup>1</sup>, Keito Oikawa<sup>1</sup>, Riri Oba<sup>1</sup>, Ryusei Endo<sup>1</sup>, Sota Kumagai<sup>1</sup>, Shigekazu Yano<sup>1</sup>, Koki Makabe<sup>1</sup>, Kenta Teruya<sup>2</sup>, Hiroyuki Konno<sup>1</sup> (<sup>1</sup>Graduate School of Science and Engineering, Yamagata University, <sup>2</sup>Graduate School of Medicine, Tohoku University)

**P-122 Synthesis and evaluation of VDR/RXR heterodimer interface-derived peptide**

Noa Uzaki, Tomoki Hatanaka, Mami Yoshizawa, Toshimasa Itoh, Nami Ohashi (Laboratory of Drug Design and Medicinal Chemistry, Showa Pharmaceutical University)

- P-123 Synthesis and properties of a His-tag-and a cell recognition site-containing collagen model peptide**  
Raraho Kanda, Kin-ya Tomizaki (Department of Materials Chemistry, Ryukoku University)
- P-124 Synthesis of glycopeptides with high-mannose oligosaccharide and investigation of their reactivities toward deglycosylating enzymes**  
Haruka Inoue<sup>1</sup>, Satoshi Takahashi<sup>1</sup>, Nozomi Ishii<sup>1</sup>, Ichiro Matsuo<sup>1</sup>, Yukiko Yoshida<sup>2</sup>, Tadashi Suzuki<sup>3</sup>, Tsuyoshi Takahashi<sup>1</sup> (<sup>1</sup>Graduate School of Science and Technology, Gunma University, <sup>2</sup>Tokyo Metropolitan Institute of Medical Science, <sup>3</sup>RIKEN)
- P-125 Synthesis of gold nanorods surface-modified with peptides containing a cell recognition site and evaluation of their anti-cancer drug loading performance**  
Conoha Yamaoka, Takahito Imai, Masahiro Asano, Kin-ya Tomizaki (Department of Materials Chemistry, Ryukoku University)
- P-126 Synthesis of peptide-modified gold nanorods with intracellular delivery function and their application to photothermal therapy**  
Soo-Ang Ahn<sup>1</sup>, Shoya Nakamura<sup>1</sup>, Shoya Fujimoto<sup>1</sup>, Takahito Imai<sup>1</sup>, Masayuki Yamasaki<sup>2,3</sup>, Kin-ya Tomizaki<sup>1,2</sup> (<sup>1</sup>Department of Materials Chemistry, Ryukoku University, <sup>2</sup>Innovative Materials and Processing Research Center, Ryukoku University, <sup>3</sup>Department of Food Sciences and Human Nutrition, Ryukoku University)
- P-127 Targeted degradation of the nuclear protein by non-enzymatic modification of linear ubiquitin chains**  
Jotaro Miyamoto, Kazuki Yoshida, Takafumi Furuhashi, Akimitsu Okamoto (Graduate School of Engineering, The University of Tokyo)
- P-128 Verification of photothermal effects and cell delivery by gold nanorods modified with hepatocellular carcinoma targeting peptides**  
Shoya Fujimoto<sup>1</sup>, Takahito Imai<sup>1</sup>, Masahiro Asano<sup>1</sup>, Masayuki Yamasaki<sup>2</sup>, Kin-ya Tomizaki<sup>1</sup> (<sup>1</sup>Department of Materials Chemistry, Ryukoku University, <sup>2</sup>Department of Food Sciences and Human Nutrition, Ryukoku University)
- P-129 Affinity peptide-integrated hydrogel for fluorescent detection of influenza virus**  
Ji Hong Kim, Jong Pil Park (Department of Food Science and Biotechnology, and GreenTech-based Food Safety Research Group, BK21 Four, Chung-Ang University)
- P-130 Development of resin-supported selenopeptide catalysts for environmentally benign reactions**  
Yua Maese<sup>1</sup>, Shiho Fukuzawa<sup>2</sup>, Michio Iwaoka<sup>2,3</sup> (<sup>1</sup>Department of Chemistry, Graduate School of Science, Tokai University, <sup>2</sup>Department of Chemistry, School of Science, Tokai University, <sup>3</sup>Institute of Advanced Biosciences, Tokai University)
- P-131 Dispersal stabilization of fluorescent silica nanoparticles conjugated with cell-penetrating peptides toward cell selective drug delivery**



Mishio Yasui, Munkhbaatar Byambadolgor, Hisakazu Mihara, Hiroshi Tsutsumi (School of Life Science and Technology, Tokyo Institute of Technology)

**P-132 Optimization of extracellular-vesicle catch-and-release isolation system using a net-charge invertible curvature-sensing peptide**

Yuuto Oosugi, Kenichi Kawano, Katsumi Matsuzaki (Graduate School of Pharmaceutical Sciences, Kyoto University)

**P-133 Peptide arrays for the identification of water-soluble polymers**

Yuki Tano, Toshiki Sawada, Shogo Saito, Masayoshi Tanaka, Mina Okochi, Takeshi Serizawa (Department of Chemical Science and Engineering, Institute of Science Tokyo)

**P-134 Peptide and glutaric acid crosslinked chitosan hydrogels promote cell attachment activities**

Yuga Ohashi<sup>1</sup>, Chie Takahashi<sup>2</sup>, Keisuke Hamada<sup>3</sup>, Motoyoshi Nomizu<sup>3</sup>, Kentaro Hozumi<sup>1</sup> (<sup>1</sup>Graduate School of Wellness, Shigakkan University, <sup>2</sup>School of Health Science, Kitasato University, <sup>3</sup>School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

**P-135 Preparation of elastic materials using water-soluble elastin with different salt concentrations and evaluation of their elasticity**

Kouki Nakamura<sup>1</sup>, Keigo Yamashita<sup>1</sup>, Ayako Tani<sup>1</sup>, Yumiko Kitada<sup>1</sup>, Ami Funaoka<sup>1</sup>, Ryotaro Nakamura<sup>1</sup>, Takeru Nose<sup>2</sup>, Iori Maeda<sup>1</sup> (<sup>1</sup>Department of Physics and Information Technology, Kyushu Institute of Technology, <sup>2</sup>Faculty of Arts and Science, Kyushu University)

**P-136 Preparation of proteins chemically modified with benzoxaboroles and their glycan recognition abilities**

Ryoga Tsuchiya, Yusuke Shima, Kazuki Akanaga, Haruki Oketani, Yuya Nishimura, Shin Ono (Applied Chemistry, Kanazawa Institute of Technology)

**P-137 “A gospel” for peptide researchers who want to be released from a huge amount of “trials and errors” in chromatography process**

Katsuhiko Miwa, Chie Kushibe (ChromaJean Co., Ltd.)

**P-138 A univesal method for sequence determination of a single bead carrying one cyclic peptide by cyanidation**

Takeshi Kasama, Atsushi Kitagawa, Toru Sasaki, Yuki Tominaga, Kiyoshi Nokihara (HiPep Laboratories)

**P-139 Affinity peptide-based electrochemical biosensor with 2D-2D nanohybrids of Ni-Cr-LDH and graphene oxide for symmetric dimethylarginine detection**

Jae Hwan Shin, Jong Pil Park (Department of Food Science and Technology, and GreenTech-based Food Safety Research Group, BK21 Four, Chung-Ang University)

**P-140 Amyloid-reoriented enzyme catalysis**

Taka Sawazaki, Fuma Murai, Kai Yamamoto, Daisuke Sasaki, Youhei Sohma (School of Pharmaceutical Sciences, Wakayama Medical University)

**P-141 Changes in moisture characteristics of hair protein by bleaching**

Kazuki Kobayashi, Hiromu Komatsu, Hironori Kimura, Kazuyuki Suzuta (Milbon Co., Ltd., Development Headquarters)

**P-142 Design and synthesis of a new cytosine derivative for PNA monomer with improved stability and affinity**

Shun-suke Moriya<sup>1</sup>, Saki Matsumoto<sup>1</sup>, Yosuke Demizu<sup>2</sup>, Masaaki Kurihara<sup>3</sup>, Atsushi Kittaka<sup>1</sup>, Toru Sugiyama<sup>1</sup> (<sup>1</sup>Faculty of Pharmaceutical Sciences, Teikyo University, <sup>2</sup>Division of Organic Chemistry, National Institute of Health Sciences, <sup>3</sup>Faculty of Pharmaceutical Sciences, Shonan University of Medical Sciences)

**P-143 Determination of counter ions of synthetic peptides using ion chromatograph**

Ayano Tanabe, Tomoko Kuriki, Hidetoshi Terada (Shimadzu Corporation)

**P-144 Development of artificial antibodies for single-molecule peptide sequencing: targeting N-terminal Phe or Gly**

Koya Sugano<sup>1</sup>, Taishi Kondo<sup>1</sup>, Shun Umemoto<sup>1</sup>, Tomoshige Fujino<sup>1</sup>, Gosuke Hayashi<sup>1</sup>, Hiroshi Murakami<sup>1,2</sup> (<sup>1</sup>Graduate School of Engineering, Nagoya University, <sup>2</sup>Institute of Nano-Life-Systems, Institutes of Innovation for Future Society, Nagoya University)

**P-145 Direct penetration of CPP-tagged cargo analyzed by electrophysiological measurements**

Mahiro Suzuki, Zugui Peng, Ryuji Kawano (Department of Life Science and Biotechnology, Tokyo University of Agriculture and Technology)

**P-146 Effect of additional disulfide bonds on conformational stability of cocoonase**

Yuri Murakami<sup>1</sup>, Nana Sakata<sup>1</sup>, Orika Ashida<sup>1</sup>, Miki Matsuzaki<sup>1</sup>, Kairi Ogawa<sup>1</sup>, Mitsuhiro Miyazawa<sup>2</sup>, Shigeru Shimamoto<sup>1</sup>, Yuji Hidaka<sup>1</sup> (<sup>1</sup>Graduate School of Science and Engineering Research, Kindai University, <sup>2</sup>PrevenTec Inc.)

**P-147 Effects of various sized keratin peptides on moisture characteristics of hair**

Kazuki Kobayashi, Hiromu Komatsu, Hironori Kimura, Kazuyuki Suzuta (Milbon Co., Ltd., Development Headquarters)

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Erina Hilmayanti<sup>1</sup>, Kazuya Kabayama<sup>1,2,3</sup>, Kazuko Kaneda-Nahashima<sup>1,2,3</sup>, Kazuhiro Ooe<sup>2,3</sup>, Atsushi Toyoshima<sup>2,3</sup>, Koichi Fukase<sup>1,2,3</sup> (<sup>1</sup>Department of Chemistry, Graduate School of Science, Osaka University, <sup>2</sup>Forefront Research Center, Graduate School of Science, Osaka University, <sup>3</sup>Institute for Radiation Sciences, Osaka University)

- P-149 Evaluation of the drug-loading capacity and release behaviors of different water-soluble elastin fractions obtained through coacervation**
- Suguru Taniguchi<sup>1</sup>, Yumi Moriuchi<sup>2</sup>, Rikuto Okubo<sup>2</sup>, Tsugumi Fujita<sup>3</sup>, Iori Maeda<sup>2</sup> (<sup>1</sup>Department of Biochemistry, Fukuoka Dental College, <sup>2</sup>Department of Physics and Information Technology, Kyushu Institute of Technology, <sup>3</sup>Department of Physiological Science and Molecular Biology, Fukuoka Dental College)
- P-150 Expression and functional analysis of the silkworm pheromone biosynthesis activating neuropeptide receptor**
- Moeto Hane<sup>1</sup>, Hideaki Itoh<sup>1</sup>, Ken Okamoto<sup>1</sup>, Suguru Okuda<sup>1</sup>, Koji Nagata<sup>1,2,3</sup> (<sup>1</sup>Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Science, The University of Tokyo, <sup>2</sup>Agricultural Bioinformatics Research Unit, Graduate School of Agricultural and Life Science, The University of Tokyo, <sup>3</sup>Research Center for Food Safety, Graduate School of Agricultural and Life Science, The University of Tokyo)
- P-151 Functional analysis of C-terminal region of B-loop in the oncogenic protein phosphatase PPM1D**
- Haruna Watabe<sup>1</sup>, Yuki Hara<sup>1</sup>, Kazuhiro Furukawa<sup>2</sup>, Nobuyasu Koga<sup>3</sup>, Yoshiro Chuman<sup>1</sup> (<sup>1</sup>Laboratory of Biological Chemistry, Graduate School of Science and Technology, Niigata University, <sup>2</sup>Cell Regulation Laboratory in Biochemistry, Graduate School of Science and Technology, Niigata University, <sup>3</sup>Institute for Protein Research (IPR), Osaka University)
- P-152 Heavy metal separation system using peptidyl beads for easy-handling environmental measurement**
- Shuhei Yoshida<sup>1</sup>, Koki Yoshida<sup>2</sup>, Takaaki Tsuruoka<sup>2</sup>, Kenji Usui<sup>2</sup> (<sup>1</sup>Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University, <sup>2</sup>Faculty of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University)
- P-153 Identification of a novel hormone response element for the enkephalin precursor gene**
- Keita Nakamura, Takeru Kajiyama, Kohei Kanazaki, Kota Aramaki, Ayami Matsushima (Department of Chemistry, Faculty of Science, Kyushu University)
- P-154 Inhibition mechanism of enzyme activity by the pro-peptide region of cocoonase**
- Orika Ashida<sup>1</sup>, Nana Sakata<sup>1</sup>, Yuri Murakami<sup>1</sup>, Kairi Ogawa<sup>1</sup>, Miki Matsuzaki<sup>1</sup>, Mitsuhiro Miyazawa<sup>2</sup>, Shigeru Shimamoto<sup>1</sup>, Yuji Hidaka<sup>1</sup> (<sup>1</sup>Graduate School of Science and Engineering Research, Kindai University, <sup>2</sup>PrevenTec Inc.)
- P-155 Is HSP47 required for the collagen triple helix-formation in all animals?**
- Hibi Inoue<sup>1</sup>, Kazunori K. Fujii<sup>1</sup>, Takaki Koide<sup>1,2</sup> (<sup>1</sup>Department of Chemistry and Biochemistry, School of Advanced Science and Engineering, Waseda University, <sup>2</sup>Waseda Research Institute for Science and Engineering, Waseda University)
- P-156 Mutational analysis of cocoonase: insights into substrate recognition in serine proteases**

Nana Sakata<sup>1</sup>, Yuri Murakami<sup>1</sup>, Orika Ashida<sup>1</sup>, Mitsuhiro Miyazawa<sup>2</sup>, Shigeru Shimamoto<sup>1</sup>, Yuji Hidaka<sup>1</sup>  
(<sup>1</sup>Graduate School of Science and Engineering Research, Kindai University, <sup>2</sup>PrevenTec Inc.)

**P-157 Optimization of turn structure for *de novo* designed nanopore-forming peptide**

Rina Ogawa<sup>1</sup>, Shoko Fujita<sup>1</sup>, Fumihiko Kayamori<sup>2</sup>, Kenji Usui<sup>2</sup>, Ryuji Kawano<sup>1</sup> (<sup>1</sup>Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, <sup>2</sup>Faculty of Frontiers of Innovative Research in Science and Technology, Konan University)

**P-158 Photooxygenation of carnosine induces its cyclic homodimerization**

Hiroko Kawakami<sup>1,2</sup>, Yuki Itakura<sup>1</sup>, Tetsuya Yamamoto<sup>1</sup>, Taku Yoshiya<sup>1,3</sup> (<sup>1</sup>Peptide Institute, Inc., <sup>2</sup>Graduate School of Science and Engineering, Kagoshima University, <sup>3</sup>Institute for Protein Research, Osaka University)

**P-159 Primary sutructure analyses of peptides containing modified amino acids and cyclic peptide with disulfide bond**

Tomoko Kuriki, Kumiko Yamaguchi, Hidetoshi Terada (Solutions COE Healthcare unit Instruments G Analytical & Measuring Instruments Division Shimadzu Corporation)

**P-160 Purification of cyclic peptides and their analogues with polymeric separation media**

Yuki Shimizu<sup>1</sup>, Shohei Ohara<sup>1</sup>, Yuichi Masuda<sup>2</sup> (<sup>1</sup>Mitsubishi Chemical Corporation, <sup>2</sup>Mie University)

**P-161 RHEOFREED<sup>®</sup>, a newly developed mixer-type lyophilizer, will become the game-changer of freeze-drying process**

Nobuaki Takahashi<sup>1</sup>, Shunsuke Ochi<sup>1</sup>, Ryosuke Kunitani<sup>1</sup>, Yoshitaka Nemoto<sup>1</sup>, Yusuke Kishi<sup>2</sup>, Tomohiro Ogawa<sup>2</sup>, Tomoharu Maeseto<sup>2</sup> (<sup>1</sup>R&D Department, Peptistar Inc, <sup>2</sup>Engineering Department Process Equipment Division, Kobelco Eco-Solutions Co., Ltd.)

**P-162 Separation and purification of a medium-sized molecular peptide drug using improved simulated moving bed system (ISMB)**

Takahiro Sakamoto<sup>1</sup>, Tsubasa Tomura<sup>1</sup>, Keiji Iwamoto<sup>2</sup> (<sup>1</sup>Mitsubishi Chemical Corporation, <sup>2</sup>Mitsubishi Chemical Aqua Solutions Corporation)

**P-163 Streamlining workflow for purification and mass analysis of synthesized peptides with a single LC-MS system**

Yusuke Masuda, Miho Kawashima, Tomoko Kuriki, Hidetoshi Terada, Ryo Kubota (Shimadzu Corporation)

**P-164 Structural analysis of human hair by using infrared free electron lasers**

Takayasu Kawasaki<sup>1</sup>, Akinori Irizawa<sup>2</sup>, Heishun Zen<sup>3</sup>, Takeshi Sakai<sup>4</sup>, Yasushi Hayakawa<sup>4</sup> (<sup>1</sup>Accelerator Laboratory, High Energy Accelerator Research Organization, <sup>2</sup>SR Center, Ritsumeikan University, <sup>3</sup>Institute of Advanced Energy, Kyoto University, <sup>4</sup>Laboratory for Electron Beam Research and Application (LEBRA), Institute of Quantum Science, Nihon University)

**P-165 Studies on diazaboroles toward development of new peptidomimetics**

Sota Chiba<sup>1</sup>, Makoto Roppongi<sup>2</sup>, Toru Oba<sup>1</sup> (<sup>1</sup>Department of Applied Chemistry, Faculty of Engineering, Utsunomiya University, <sup>2</sup>Center for Instrumental Analysis, Utsunomiya University)

**P-166 Synthesis of reverse micelle-forming peptide surfactants exhibiting enhanced transdermal absorption**

Shosei Mizuguchi<sup>1</sup>, Hiroki Murakami<sup>2</sup>, Junko Kuwahara<sup>2</sup> (<sup>1</sup>Graduate School of Engineering Life, Environment and Applied Chemistry, <sup>2</sup>Department of Life, Environment and Applied Chemistry, Fukuoka Institute of Technology)

**P-167 Therapeutic effect of curcumin derivative GT863 on PRP-amyloid and prion-infected cells and mice**

Kenta Teruya<sup>1</sup>, Ayumi Oguma<sup>1</sup>, Sara Iwabuchi<sup>1</sup>, Michiaki Okuda<sup>2</sup>, Hiroyuki Konno<sup>3</sup>, Hachiro Sugimoto<sup>2</sup>, Katsumi Doh-ura<sup>1</sup> (<sup>1</sup>Graduate School of Medicine, Tohoku University, <sup>2</sup>Green Tech Co., Ltd., <sup>3</sup>Graduate School of Science and Engineering, Yamagata University)

**P-168 Phage-encoded bismuth bicycles enable instant access to targeted bioactive peptides**

Sven Ullrich, Upamali Somathilake, Minghao Shang and Christoph Nitsche (Research School of Chemistry, Australian National University, Canberra, ACT 2601, Australia)