

51st Japanese Peptide Symposium Schedule

Oct 22 (Wed)

Oct 23 (Thu)

Oct 24 (Fri)

8:00	8:00	(Registration)		8:30	(Registration)	8:30	(Registration)
9:00	9:00	Opening Remarks		9:00	Oral Presentaitons <u>O-01-04</u>	9:00	Oral Presentaitons <u>O-12-15</u>
	9:10	Young Investigator's Oral Presentations <u>Y-01-05</u>					
10:00	10:15			10:20		10:20	
	10:35	Young Investigator's Oral Presentations <u>Y-06-10</u>		10:30	Oral Presentaitons <u>O-05-08</u>	10:30	Oral Presentaitons <u>O-16-19</u>
11:00							
	11:40			11:50		11:50	
12:00					Luncheon Seminar (Merck Ltd.)		Luncheon Seminar (GlyTech, Inc.)
	13:00	Invited Lectures <u>K-01, 02</u>		13:10	JPS General Meeting	13:10	Oral Presentations <u>O-20, 21</u>
13:00						13:50	
	14:00			14:10		14:00	Lectures of the Young Investigator Award
14:00	14:10	Young Investigator's Oral Presentations <u>Y-11-16</u>		14:20	Oral Presentations <u>O-09-11</u>		
15:00						15:00	
	15:30			15:20		15:10	Lecture of the Akabori Memorial Award
	15:50			15:40			
16:00		Poster Presentations (Odd Numbers)			Poster Presentations (Even Numbers)	16:00	Closing Remarks
						16:15	
17:00	17:20			17:10			
18:00							
				18:30			
19:00					Banquet (PARK WESTON)		
20:00							
				20:30			

The 51st Japanese Peptide Symposium

October 22 (Wednesday)

9:00-9:10 **Opening Remarks (Akira Otaka) (Main Hall)**

Young Investigator's Oral Presentations (lecture 10 min + discussion 3 min) (Main Hall)

9:10-10:15 (Chair: Yosuke Demizu, Shinya Oishi)

Y-01 The first non-enzymatic dynamic kinetic resolution of racemic 2-(1*H*-pyrrol-1-yl)alkanoic acids by the asymmetric esterification using chiral acyl-transfer catalyst

Takayoshi Nakahara, Atsushi Tengeji, Eri Tokumaru, Isamu Shiina (Department of Applied Chemistry, Tokyo University of Science)

Y-02 Development of efficient synthetic methodologies of chloroalkene dipeptide isosteres

Takuya Kobayakawa¹, Tetsuo Narumi², Hirokazu Tamamura¹ (¹Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, ²Faculty of Engineering, Shizuoka University)

Y-03 Solid phase synthesis of the cyclic fragment of homophymine B

Yoshinori Tokairin, Ryo Yoshino, Sho Takeda, Hiroyuki Konno (Department of Biochemical Engineering, Graduate School of Science and Technology, Yamagata University)

Y-04 Synthesis and function of mycobacterium cell wall peptidoglycan fragments

Qianqian Wang^{1,2}, Yusuke Matsuo¹, Yukari Fujimoto², Koichi Fukase¹ (¹Graduate School of Science, Osaka University, ²Graduate School of Science and Technology, Keio University)

Y-05 Development of 8-azacoumarin-4-ylmethyl-type photolabile protecting groups based on amide-alkene isosterism

Hikaru Takano¹, Tetsuo Narumi², Wataru Nomura¹, Toshiaki Furuta³, Hirokazu Tamamura¹ (¹Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, ²Faculty of Engineering, Shizuoka University, ³Department of Biomolecular Science, Toho University)

10:15-10:35 **Coffee Break**

10:35-11:40 (Chair: Hiroyuki Konno, Tetsuo Narumi)

Y-06 Preparation of peptide/protein thioesters using a chemical protocol applicable to expressed proteins

Yusuke Tsuda, Akira Shigenaga, Masaya Denda, Kohei Sato, Keisuke Kitakaze, Takahiro Nakamura, Tsubasa Inokuma, Kohji Itoh, Akira Otaka (Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima)

Y-07 The direct use of peptide with C-terminal *N*-alkylcysteine for the native chemical ligation

Yuya Asahina¹, Kei Nabeshima², Hironobu Hojo¹ (¹Institute for Protein Research, Osaka University, ²Applied Biochemistry, Tokai University)

Y-08 Development of novel neurokinin-3 receptor selective agonists with resistance against proteolytic degradation

Ryosuke Mitsu¹, Shinya Oishi¹, Ai Yamada¹, Koki Yamamoto¹, Taro Noguchi¹, Hiroaki Ohno¹, Takashi Yamamura², Hiroaki Okamura², Fuko Matsuda³, Satoshi Ohkura³, Nobutaka Fujii¹ (¹Graduate School of Pharmaceutical Sciences, Kyoto University, ²Animal Physiology Research Unit, National Institute of Agrobiological Sciences, ³Graduate School of Bioagricultural Sciences, Nagoya University)

- Y-09** Efficient method of synthesizing disulfide peptides using 3-nitro-2-pyridinesulfonyl (Npys) resin
Akihiro Taguchi¹, Kentarou Fukumoto^{1,2}, Yuya Asahina³, Akihiro Kajiyama¹, Keisuke Hamada¹, Shunsuke Shimura¹, Kentaro Takayama¹, Fumika Yakushiji¹, Hironobu Hojo³, Yoshio Hayashi¹ (¹Department of Medicinal Chemistry, Tokyo University of Pharmacy and Life Sciences, ²Kokusan Chemical, Co., Ltd., ³Laboratory of Protein Organic Chemistry, Institute for Protein Research, Osaka University)
- Y-10** Postsynthetic modification of fully unprotected peptides via S-tritylation reaction
Masayoshi Mochizuki¹, Hajime Hibino¹, Yuji Nishiuchi^{1,2} (¹Peptide Institute, INC., ²Graduate School of Science, Osaka University)

11:40-13:00 Lunch Break

Invited Lectures (Main Hall)

13:00-14:00 (Chair: Motoyoshi Nomizu, Kazuyasu Sakaguchi)

- K-01** Structural study on the sarah domains in apoptosis signaling
Eunha Hwang¹, Hae-Kap Cheong¹, Ameerq Ul Mushtaq², Chaejoon Cheong¹, Young Ho Jeon² (¹Division of Magnetic Resonance Research, Korea Basic Science Institute, Ochang, ²College of Pharmacy, Korea University)
- K-02** Peptidomimetics approach to targeting protein-protein interactions
Ji Hoon Lee, Misook Oh, Heejo Moon, Hyun-Suk Lim (Department of Chemistry, Pohang University of Science and Technology (POSTECH))

14:00-14:10 Coffee Break

Young Investigator's Oral Presentations (lecture 10 min + discussion 3 min) (Main Hall)

14:10-15:30 (Chair: Ikuhiko Nakase, Wataru Nomura)

- Y-11** Structural and functional analysis of the endogenous peptide inhibiting snake venom
Narumi Shioi (Aoki)¹, Yoshitetsu Handa¹, Seiji Shioi², Shigeyuki Terada¹ (¹Faculty of Science and ²Radioisotope Center, Fukuoka University)
- Y-12** A novel peptide sequence for endosome disruption derived from natural hemolytic peptide
Misao Akishiba, Toshihide Takeuchi, Yoshimasa Kawaguchi, Shiroh Futaki (Institute for Chemical Research, Kyoto University)
- Y-13** Development of chemiluminescent enzyme immunoassays for three endogenous molecular forms of human atrial natriuretic peptide in plasma
Chiaki Nagai, Naoto Minamino (Department of Molecular Pharmacology, National Cerebral and Cardiovascular Center Research Institute)
- Y-14** Insulin fibrillation by shaking under neutral pH conditions: Examination of insulin analogs modified at dimer-forming interface
Hiromu Yoshihara, Ayaka Tanabe, Takuma Amada, Toshinari Asakura, Kouki Kitagawa, Shinichi Asada (Niigata University of Pharmacy and Applied Life Sciences)

Y-15 Bisphenol A-induced substantial peak decay of *Drosophila* circadian neuropeptide *hugin* mRNA expression

Shotaro Umeno¹, Ayaka Matsuo¹, Yutaka Matsuyama¹, Masayuki Nakamura¹, Keita Koga¹, Xiaohui Liu¹, Ayami Matsushima¹, Miki Shimohigashi², Yasuyuki Shimohigashi¹ (¹Laboratory of Structure-Function Biochemistry, Department of Chemistry, Faculty and Graduate School of Science, and Risk Science Research Center, Kyushu University, ²Division of Biology, Department of Earth System of Science, Faculty of Science, Fukuoka University)

Y-16 Difference between *in vitro*, *ex vivo*, and *in vivo* ACE inhibitory activities of antihypertensive peptides

Masahiro Koyama¹, Ryuya Ishida², Akira Watanabe¹, Kozo Nakamura^{1,2,3} (¹Faculty of Agriculture, Shinshu University, ²Graduate School of Agriculture, Shinshu University, ³Academic Assembly, Institute of Agriculture, Shinshu University)

15:30-15:50 **Coffee Break**

15:50-17:20 **Poster Presentations; Odd Numbers (2F)**

October 23 (Thursday)

Oral Presentations (lecture 15 min + discussion 5 min) (Main Hall)

9:00-10:20 (Chair: Yoshio Hayashi, Toru Kawakami)

O-01 Total synthesis and 3D structural analysis of PF1171A, C, F, and G

Yuichi Masuda¹, Ren Tanaka¹, Kenji Kai², A. Ganesan³, Takayuki Doi¹ (¹Graduate School of Pharmaceutical Sciences, Tohoku University, ²Graduate School of Life and Environmental Sciences, Osaka Prefecture University, ³School of Pharmacy, University of East Anglia)

O-02 Next generation AJIPHASE[®]; Development of one-pot peptide synthesis using liquid-liquid extraction

Daisuke Takahashi, Tatsuji Inomata (Research Institute for Bioscience Products and Fine Chemicals, AJINOMOTO Co., Inc.)

O-03 A novel scaffold designed from peptide-based SARS 3CL protease inhibitors

Yasunao Hattori¹, Yasuhiro Shimamoto¹, Kazuya Kobayashi¹, Kenta Teruya², Atsushi Nakagawa³, Eiki Yamashita³, Akira Sanjoh⁴, Kenichi Akaji¹ (¹Department of Medicinal Chemistry, Kyoto Pharmaceutical University, ²Department of Chemistry, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, ³Institute for Protein Research, Osaka University, ⁴R&D Center, Protein Wave Co.)

O-04 Chemical syntheses of peptides consisting of pyrrole and imidazole as building blocks and mass-spectrometric elucidation of their microheterogeneity

Kiyoshi Nokihara¹, Akiyoshi Hirata¹, Yuki Tominaga¹, Atsushi Kitagawa¹, Takeshi Kasama² (¹HiPep Laboratories, ²Tokyo Medical and Dental University)

10:20-10:30 **Coffee Break**

10:30-11:50 (Chair: Ayami Matsushima, Hidehito Mukai)

- O-05** Structure-function relationships of spinoxin, a peptide neurotoxin from scorpion venom
Steve Peigneur¹, Yoko Yamaguchi², Chihiro Kawano², Takeru Nose³, Selvanayagam Nirthanan⁴, Ponnampalam Gopalakrishnakone⁴, Jan Tytgat¹, **Kazuki Sato**² (¹Laboratory of Toxicology and Pharmacology, University of Leuven, ²Department of Environment Science, Fukuoka Women's University, ³Faculty of Arts and Science, Kyushu University, ⁴Venom and Toxin Research Program, Faculty of Medicine, National University of Singapore)
- O-06** An *in vitro* selected macrocyclic peptide ligand for cocrystallization of transporter CmABCB1
Christopher John Hipolito¹, Atsushi Kodan², Tomohiro Yamaguchi³, Toru Nakatsu³, Keita Sakiyama³, Akane Fujioka³, Ryo Hirokane³, Yasuhisa Kimura², Katsumitsu Ueda², Hiroaki Kato², Hiroaki Suga¹ (¹Department of Chemistry, Graduate School of Science, The University of Tokyo, ²Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University, ³Department of Structural Biology, Graduate School of Pharmaceutical Sciences, Kyoto University)
- O-07** Discovery of human neuromedin U receptor type 2-selective hexapeptide agonists
Kentaro Takayama¹, Kenji Mori², Koji Taketa¹, Akihiro Taguchi¹, Fumika Yakushiji¹, Naoto Minamino³, Mikiya Miyazato², Kenji Kangawa², and Yoshio Hayashi¹ (¹Department of Medicinal Chemistry, Tokyo University of Pharmacy and Life Sciences, ²Department of Biochemistry and ³Department of Molecular Pharmacology, National Cerebral and Cardiovascular Center Research Institute)
- O-08** Role of the tenascin-C-derived peptide TNIIIA2 in the formation of atherosclerotic foam cell
Takuya Iyoda^{1,2}, Mika Kazama¹, Koujiro Takeda¹, Fumio Fukai^{1,2} (¹Department of Molecular Patho-Physiology, Faculty of Pharmaceutical Sciences, ²Center for Physical Pharmaceutics, Research Institute for Science & Technology, Tokyo University of Science)

11:50-13:10 Luncheon Seminar: Merck Ltd. (Studio Plaza)

13:10-14:10 JPS General Meeting (Main Hall)

14:10-14:20 Coffee Break

Oral Presentations (lecture 15 min + discussion 5 min) (Main Hall)

14:20-15:20 (Chair: Tatsuhiro Ishida, Katsumi Matsuzaki)

- O-09** Nanomolar inhibition of HIV-1 transcription using dimeric α -helical cell-penetrating peptides
Sangmok Jang¹, Soonsil Hyun², Seoyeon Kim², Seonju Lee¹, Im-Soon Lee³, Masamori Baba⁴, Yan Lee¹, Jaehoon Yu² (¹Department of Chemistry, Seoul National University, ²Department of Chemistry & Education, Seoul National University, ³Department of Biological Sciences, Konkuk University, ⁴Graduate School of Medical and Dental Sciences, Kagoshima University)
- O-10** Exosome-mediated cytosolic delivery system using cationic lipids and pH-sensitive fusogenic peptide
Ikuhiko Nakase¹, Shiroh Futaki² (¹Nanoscience and Nanotechnology Research Center, Research Organization for the 21st Century, Osaka Prefecture University, ²Institute for Chemical Research, Kyoto University)
- O-11** Membrane translocation of arginine-rich peptides and the effect of membrane curvature
Shiroh Futaki, Tomo Murayama, Sílvia Pujals, Sayaka Katayama, Hisaaki Hirose, Hiroki Miyamae, Ikuhiko Nakase (Institute for Chemical Research, Kyoto University)

- 15:20-15:40** **Coffee Break**
- 15:40-17:10** **Poster Presentations; Even Numbers (2F)**
- 18:30-20:30** **Banquet (PARK WESTON)**

October 24 (Friday)

Oral Presentations (lecture 15 min + discussion 5 min) (Main Hall)

9:00-10:20 (Chair: Hisakazu Mihara, Kenji Usui)

- O-12** Amyloid-selective photooxygenation by on/off switchable catalyst
Atsuhiko Taniguchi^{1,2}, Yusuke Shimizu¹, Kounosuke Oisaki¹, Youhei Sohma^{1,2}, Motomu Kanai^{1,2}
(¹Graduate School of Pharmaceutical Sciences, The University of Tokyo, ²Japan Science and Technology Agency (JST), ERATO, Kanai Life Science Catalysis Project)
- O-13** Construction of detection system for ligand-protein interactions using native chemical ligation and protein splicing
Tsuyoshi Takahashi (Advanced Scientific Research Leaders Development Unit, Gunma University)
- O-14** Self-assembly of artificial viral capsid dressed up with proteins
Kazunori Matsuura¹, Takahide Honjo¹, Takashi Iwasaki² (¹Graduate School of Engineering, Tottori University, ²Faculty of Agriculture, Tottori University)
- O-15** Constrained peptide scaffold for identification of target-binding peptides with high affinity
Tetsuya Kadonosono, Maika Kitazawa, Takuya Tsubaki, Takahiro Kuchimaru, Shinae Kondoh
(Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology)

10:20-10:30 **Coffee Break**

10:30-11:50 (Chair: Noriaki Minakawa, Hirokazu Tamamura)

- O-16** Rolling circle amplification of peptide in translation system using small circular RNA
Hiroshi Abe^{1,2,3}, Naoko Abe¹, Hideto Maruyama^{1,2}, Yukari Nakano¹, Akira Matsuda¹, Yoshihiro Ito², Satoshi Shuto¹ (¹Faculty of Pharmaceutical Sciences, Hokkaido University, ²RIKEN, ³PRESTO, Japan Science and Technology Agency)
- O-17** Screening of peptide ligands using structured design peptide libraries displayed on phages
Hiroshi Tsutsumi, Kazuhiko Nakano, Kanako Arai, Hisakazu Mihara (Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology)
- O-18** Functional analysis of liposome anchoring peptide selected by complementary DNA display (cDNA display)
Naoto Nemoto, Yuki Yoshikawa, Toshiki Miyajima, Shota Kobayashi (Graduate School of Science and Engineering, Saitama University)
- O-19** Synthesis and characterization of tandem hairpin polyamide for telomeres visualization
Akiyoshi Hirata¹, Kiyoshi Nokihara¹, Yusuke Kawamoto², Toshikazu Bando², Kazuhiro Maeshima³, Asuka Sasaki³, Satoru Ide³, Hiroshi Sugiyama² (¹HiPep Laboratories, ²Graduate School of Science, Kyoto University, ³Structural Biology Center, National Institute of Genetics)

11:50-13:10 Luncheon Seminar : GlyTech, Inc. (Studio Plaza)

Oral Presentations (lecture 15 min + discussion 5 min) (Main Hall)

13:10-13:50 (Chair: Yoshiro Chuman, Shiroh Futaki)

O-20 Improved pre-targeting strategy for molecular imaging: Synergistic effects by strong interaction of peptides and weak interaction of glycans

Misako Taichi¹, Rie Imamaki², Yasuhiko Kizuka², Shinobu Kitazume², Naoyuki Taniguchi², Katsunori Tanaka¹ (¹Biofunctional Synthetic Chemistry Laboratory, RIKEN, ²Disease Glycomics Team, Systems Glycobiology Research Group, RIKEN-Max Plank Joint Research Center for Systems Chemical Biology, Global Research Cluster, RIKEN)

O-21 Design and synthesis of trivalent CXCR4 ligands utilizing polyproline linkers

Wataru Nomura, Taisuke Koseki, Takaaki Mizuguchi, Hirokazu Tamamura (Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University)

13:50-14:00 Coffee Break

14:00-15:00 Lectures of the Young Investigator Award (Main Hall)

(Chair: Hironobu Hojo, Masakazu Tanaka)

15:00-15:10 Coffee Break

15:10-16:00 Lecture of the Akabori Memorial Award (Main Hall)

(Chair: Kenichi Akaji)

16:00-16:15 Closing Remarks (Akira Otaka) (Main Hall)

Poster Presentations

(2F)

(discussion 90 min)

Odd numbers; October 22 (Wednesday) 15:50-17:20

Even numbers; October 23 (Thursday) 15:40-17:10

Set up; October 22 (Wednesday) by 13:00

Removal; October 24 (Friday) by 13:00

- P-001** Synthesis and properties of Ni(II) complexes derived from a family of new α -(phenyl)ethylamine-based ligands
Hiroki Moriwaki¹, Daniel Resch², Hengguang Li², Iwao Ojima², Ryosuke Takeda¹, José Luis Aceña³, Vadim A. Soloshonok^{3,4} (¹Research and Development Department, Hamari Chemicals, Ltd., ²Department of Chemistry, Institute of Chemical Biology & Drug Discovery, State University of New York at Stony Brook, ³Department of Organic Chemistry, Faculty of Chemistry, University of the Basque Country UPV/EHU, ⁴IKERBASQUE, Basque Foundation for Science)
- P-002** New α -(phenyl)ethylamine-derived chiral ligand for chemical resolution of α -amino acids
Ryosuke Takeda¹, Akie Kawamura¹, Aki Kawashima¹, Tatsunori Sato¹, Hiroki Moriwaki¹, José Luis Aceña², Vadim A. Soloshonok^{2,3} (¹Research and Development Department, Hamari Chemicals, Ltd., ²Department of Organic Chemistry, Faculty of Chemistry, University of the Basque Country UPV/EHU, ³IKERBASQUE, Basque Foundation for Science)
- P-003** Selective detection of aminothiols using fluorescent dihydrobenzofuran derivative
Kouhei Shimada, Yohei Okada, Yoshikazu Kitano, Kazuhiro Chiba (Department of Applied Biological Chemistry, Graduate School of Agriculture, Tokyo University of Agriculture and Technology)
- P-004** Modified deazaguanines for the synthesis of PNA
Toru Sugiyama¹, Keiko Kuwata², Yasutada Imamura³, Yosuke Demizu⁴, Masaaki Kurihara⁴, Masashi Takano⁵, Atsushi Kittaka⁵ (¹Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, ²Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University, ³Faculty of Engineering, Kogakuin University, ⁴Division of Organic Chemistry, National Institute of Health Sciences, Ministry of Health and Welfare, ⁵Faculty of Pharmaceutical Sciences, Teikyo University)
- P-005** Study on the peptide separation using pulverized beads of monolithic silica for flash chromatography
Riichi Miyamoto^{1,3}, Mika Watanabe², Teruhiko Kanno², Hong-zhi Bai¹, Takashi Ohtani², Kazuki Nakanishi³ (¹SnG Inc., ²Hamari Chemicals, LTD., ³Graduate School of Science, Kyoto University.)
- P-006** Elucidation of the disulfide bonding pattern of the insecticidal peptide LaIT2 isolated from the *Liocheles australasiae* scorpion venom
Ryo Ando, Masahiro Miyashita, Yoshiaki Nakagawa, Hisashi Miyagawa (Graduate School of Agriculture, Kyoto University)

- P-007** Trapping mechanism of bioactive conformation by intra-molecular chaperone
Yukihito Yokoyama¹, Masaki Okumura², Shigeru Shimamoto³, Hiroshi Yamaguchi¹, Yuji Hidaka³
(¹School of Science and Technology, Kwansai Gakuin University, ²Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, ³Faculty of Science and Engineering, Kinki University)
- P-008** Purification and characterization of calcitonin-related peptide from the starfish, *Asterina pectinifera*
Hye-Jin Go¹, **Hye Young Oh**¹, Mi Jeong Jo², Chan-Hee Kim¹, Gun-Do Kim², Nam Gyu Park¹
(¹Department of Biotechnology, Pukyong National University, ²Department of Microbiology, Pukyong National University)
- P-009** Isolation and characterization of a novel bioactive eicosapeptide from the starfish, *Asterina pectinifera*
Hye-Jin Go, **Tae Young Kim**, Chan-Hee Kim, Nam Gyu Park (Department of Biotechnology, Pukyong National University)
- P-010** Isolation of a novel antimicrobial peptide from sea anemone, *Urticina crassicornis*
Ye Jin Lee¹, Hye Young Oh¹, Hye-Jin Go¹, Chan-Hee Kim¹, Sung Soo Kim¹, Byung-Woo Lee², Nam Gyu Park¹ (¹Department of Biotechnology, Pukyong National University, ²Department of Materials System Engineering, Pukyong National University)
- P-011** Production method for the functional cyclic dipeptide derived from collagen
Fumitaka Hayasaka, Shoko Yamamoto, Yasuo Sakai (Central Research Institute, Jellice Co., Ltd)
- P-012** Microwave-assisted solid-phase peptide synthesis of neurosecretory protein GL and GM
Keiko Masuda, Haruka Ooyama, Kenshiro Shikano, Kunihiro Kondo, Megumi Furumitsu, Eiko Iwakoshi-Ukena, Kazuyoshi Ukena (Graduate School of Integrated Arts and Sciences, Hiroshima University)
- P-013** Development of squaric acid-containing peptide analogs as caspase-3 inhibitors
Kentaro Maeda, Yasufumi Ohfune, Tetsuro Shinada (Graduate School of Science, Osaka City University)
- P-014** Synthetic studies of lydiamycin A
Tomoya Kanehira, Tsutomu Aizawa, Hiroshi Gouhara, Akinari Hamajima, Tetsuhiro Nemoto, Yasumasa Hamada (Graduate School Pharmaceutical Sciences, Chiba University)
- P-015** Development of dimeric peptide derivatives based on gp41 fragments as HIV-1 fusion inhibitors
Yuzuna Honda, Takaaki Mizuguchi, Chie Hashimoto, Shohei Taketomi, Nami Ohashi, Wataru Nomura, Hirokazu Tamamura (Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University)
- P-016** Studies of the peptide crystal form and its process development for commercial production
Ryosuke Kunitani, Aiko Hasegawa, Yoshinori Murata (Chemical Development Center, CMC Development Laboratories, Shionogi & Co., Ltd.)
- P-017** Studies on lactam formation of arginine derivatives
Rina Akashi, Toshiyuki Inazu (Department of Applied Chemistry, School of Engineering and Institute of Glycoscience, Tokai University)
- P-018** Preparation of transmembrane peptides using a mobile phase containing 2,2,2-trifluoroethanol; Analysis and prevention of potential side reactions due to formic acid
Yue Huang¹, Toshiaki Hara^{1,2}, Akihiro Ito¹, Toru Kawakami³, Hironobu Hojo³, Michio Murata^{1,2}
(¹Graduate School of Science, Osaka University, ²JST ERATO, Lipid Active Structure Project, Osaka University, ³Institute for Protein Research, Osaka University)
- P-019** Facile preparation of a *N*-acetylglucosaminated asparagine derivative useful for glycopeptide synthesis
Hidekazu Katayama (Department of Applied Biochemistry, School of Engineering, Tokai University)

- P-020** Development of *N*-glycosylated asparagine ligation and its application to total chemical synthesis of GM2 activator protein
Kohei Sato, Keisuke Kitakaze, Ken Sakamoto, Akira Shigenaga, Tsubasa Inokuma, Daisuke Tsuji, Kohji Itoh, Akira Otaka (Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima)
- P-021** One-pot chemical synthesis of CXCL14 using *N*-sulfanylethylamide peptide
Kohei Tsuji¹, Kohei Sato¹, Ken Sakamoto¹, Kosuke Tanegashima², Akira Shigenaga¹, Tsubasa Inokuma¹, Takahiko Hara², Akira Otaka¹ (¹Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima, ²Stem Cell Project, Tokyo Metropolitan Institute of Medical Science)
- P-022** Preparation of peptide thioesters using *N*-sulfanylethylcoumarinylamide peptide
Mitsuhiro Eto¹, Masaya Denda¹, Kohei Sato¹, Ken Sakamoto¹, Tsubasa Inokuma¹, Akira Shigenaga^{1,2}, Akira Otaka¹ (¹Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima, ²PRESTO, Japan Science and Technology Agency)
- P-023** Phenacyl group as a protecting group for thiol in the use of recombinant peptides as building blocks for the peptide ligation strategy
Toru Kawakami, Hironobu Hojo (Institute for Protein Research, Osaka University)
- P-024** Aqueous microwave assisted peptide synthesis using Fmoc amino acids nanoparticles: Synthesis of His-containing peptides
Keiko Hojo¹, Koshi Hidaka¹, Natsuki Shinozaki¹, Yuko Tsuda¹, Yoshinobu Fukumori¹, Hideki Ichikawa¹, John D. Wade^{2,3} (¹Faculty of Pharmaceutical Sciences & Cooperative Research Center of Life Sciences, Kobe Gakuin University, ²The Florey Institute of Neuroscience and Mental Health, ³School of Chemistry, University of Melbourne)
- P-025** Liquid phase total synthesis of human insulin: Using a hydrophobic tag
Masahito Takahashi, Kazumi Shimizu, Kazuhiro Chiba (Department of Applied Biological Chemistry, Tokyo University of Agriculture and Technology)
- P-026** Large scale synthesis of h-Ghrelin employing side chain non-protected Fmoc-Ser (OH)-OH
Hideaki Suzuki¹, Shuuji Fujita¹, Susumu Mutho¹, Hitoshi Abe², Kazuhiro Chiba³ (¹Manufacturing Technology Development, Jitsubo Co., Ltd., ²Iwate Research & Development Center, Sekisui Medical Co.,LTD., ³Department of Applied Biological Science, Tokyo University of Agriculture and Technology)
- P-027** Synthesis of a hydrophobic tag for C-terminal amidated peptide synthesis
Emiko Matsumoto, Yoshikazu Kitano, Kazuhiro Chiba (Department of Applied Biological Chemistry, Graduate School of Agriculture, Tokyo University of Agriculture and Technology)
- P-028** Synthesis of conjugated oligonucleotide in solution-phase using alkyl-chain-soluble support
Takao Shoji, Shokaku Kim, Kazuhiro Chiba (Laboratory of Bio-organic Chemistry, Tokyo University of Agriculture and Technology)
- P-029** An electrochemical approach for the synthesis of intramolecular crosslinked peptides
Keisuke Ogami, Yohei Okada, Yoshikazu Kitano, Kazuhiro Chiba (Department of Applied Biological Chemistry, Graduate School of Agriculture, Tokyo University of Agriculture and Technology)
- P-030** Synthesis of thermosensitive peptides by hydrophobic tag strategy
Yuko Dehari, Yuko Fujita, Shokaku Kim, Kazuhiro Chiba (Laboratory of Bioorganic Chemistry, Tokyo University of Agriculture and Technology)

- P-031** Hydrophobic peptide production by using new solubilizing tail method
Hirofumi Maeda¹, **Keishi Takatsu**¹, Fengying Li², Xiaobing Wang², Akio Fujii¹ (¹Biotechnology Development Laboratories, Kaneka Corporation, ²AnaSpec, Inc.)
- P-032** Artificial post-translational modifications toward synthesis of azole-containing peptides and azolidine-containing peptides
Yasuharu Kato¹, Yuki Goto^{1,2}, Hiroaki Suga¹ (¹Department of Chemistry, Graduate School of Science, The University of Tokyo, ²PRESTO, Japan Science and Technology Agency)
- P-033** Ribosomal thioester bond formation
Ryo Takatsuji¹, Takayuki Katoh¹, Hiroaki Suga^{1,2} (¹Department of Chemistry, Graduate School of Science, University of Tokyo, ²Japan Science and Technology Agency, Core Research for Evolutional Science and Technology, University of Tokyo)
- P-034** Encoding multiple nonproteinogenic amino acids besides proteinogenic ones by artificial codon box division
Yoshihiko Iwane¹, Azusa Hitomi², Yuki Goto¹, Takayuki Katoh¹, Hiroshi Murakami³, Hiroaki Suga¹ (¹Department of Chemistry, Graduate School of Science, The University of Tokyo, ²Department of Chemistry and Biotechnology, Graduate School of Engineering, The University of Tokyo, ³Research Center for Advanced Science and Technology, The University of Tokyo)
- P-035** Chemical synthesis of head-to-tail cyclized anti-VEGF microantibody
Kentaro Takahashi, Masataka Michigami, Ikuo Fujii (Department of Biological Science, Graduate School of Science, Osaka Prefecture University)
- P-036** Synthesis and biological evaluation of PF1171F analogues
Yuichi Masuda¹, **Ren Tanaka**¹, Kenji Kai², A. Ganesan³, Takayuki Doi¹ (¹Graduate School of Pharmaceutical Sciences, Tohoku University, ²Graduate School of Life and Environmental Sciences, Osaka Prefecture University, ³School of Pharmacy, University of East Anglia)
- P-037** Identification of novel CXCR7 selective ligands with cyclic pentapeptide scaffold
Tomoko Kuroyanagi¹, Shinya Oishi¹, Tatsuhiko Kubo¹, Yuka Kobayashi¹, Ryosuke Misu¹, Hiroaki Ohno¹, Nicolas Montpas², Nikolaus Heveker², Yasushi Yoshikawa³, Toshio Furuya³, Nobutaka Fujii¹ (¹Graduate School of Pharmaceutical Sciences, Kyoto University, ²Centre de Recherche, Hôpital Sainte-Justine, ³Drug Discovery Department, Research & Development Division, PharmaDesign Inc.)
- P-038** Development of stabilized short helical peptides with cell-membrane penetrating ability
Hiroko Yamashita^{1,2}, Yosuke Demizu², Takashi Misawa², Makoto Oba³, Masakazu Tanaka³, Masaaki Kurihara^{1,2} (¹Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, ²Division of Organic Chemistry, National Institute of Health Sciences, ³Graduate School of Biomedical Sciences, Nagasaki University)
- P-039** Curvature sensitive membrane disruption by amphipathic peptides derived from Adenovirus protein VI
Tomo Murayama, Silvia Pujals, Shiroh Futaki (Institute for Chemical Research, Kyoto University)
- P-040** Role of glycosaminoglycan interaction in biological membrane penetration of arginine-rich cell-penetrating peptide
Yuki Takechi¹, Yuto Yanagisawa¹, Kazuchika Nishitsuji², Kenji Uchimura³, Toru Kawakami⁴, Keiichiro Okuhira¹, Hiroyuki Saito¹ (¹Institute of Health Biosciences, Graduate School of Pharmaceutical Sciences, The University of Tokushima, ²Department of Human Pathology, Institute of Health Biosciences, The University of Tokushima Graduate School, ³Department of Biochemistry, Nagoya University Graduate School of Medicine, ⁴Institute for Protein Research, Osaka University)

- P-041** High cell penetrating ability and inducing apoptosis by conformationally constrained dimeric peptide at low concentration
Seonju Lee¹, Soonsil Hyun², Seoyeon Kim², Sangmok Jang¹, Jaehoon Yu², Yan Lee¹ (¹Department of Chemistry, Seoul National University, ²Department of Chemistry & Education, Seoul National University)
- P-042** Specific introduction of a glutamine residue of an α -helical antimicrobial peptide converts its membrane disrupting to cell penetrating ability elucidated by methotrexated-conjugated hemolytic activity
Seoyeon Kim, Yuri Lee, Jaehoon Yu (Seoul National University)
- P-043** Design and synthesis of amphipathic α -helical model peptides to optimize cell-penetrating properties
Sunmi Jin, Seoyeon Kim, Jaehoon Yu (Department of Chemistry & Education, Seoul National University)
- P-044** Design of artificial cell-penetrating protein focusing on its structural anisotropy and rigidity
Norihisa Nakayama^{1,2}, Kyoji Hagiwara^{2,3}, Yoshihiro Ito², Kuniharu Ijiri^{2,4}, Yoshihito Osada², Ken-Ichi Sano^{1,2,5} (¹Graduate School of Environmental Symbiotic System Major, Nippon Institute of Technology, ²Nano Medical Engineering Laboratory, RIKEN, ³Neurovirology Project, Tokyo Metropolitan Institute of Medical Science, ⁴Reserch Institute for Electronic Science, Hokkaido University, ⁵Department of Innovative Systems Engineering, Nippon Institute of Technology)
- P-045** Development of cell-permeable peptide for transcriptional inhibitor of estrogen receptor
Takaya Nagakubo^{1,2}, Yosuke Demizu¹, Takashi Misawa¹, Yukiko Sato¹, Yasunari Kanda¹, Keiichiro Okuhira¹, Yuko Sekino¹, Mikihiko Naito¹, Masaaki Kurihara^{1,2} (¹National Institute of Health Sciences, ²Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology)
- P-046** Cyclic RGD-MAP (Aib) conjugates for delivery of small interfering RNA
Shun-ichi Wada, Yuka Ozaki, Takashi Ozaki, Masashi Iwata, Junsuke Hayashi, and Hidehito Urata (Osaka University of Pharmaceutical Sciences)
- P-047** Roles of individual disulfide bridges in the conformation and activity of spinoxin, a peptide neurotoxin from scorpion venom
Yoko Yamaguchi¹, Steve Peigneur², Selvanayagam Nirthanan³, Ponnampalam Gopalakrishnakone³, Jan Tytgat², Kazuki Sato¹ (¹Department of Environment Science, Fukuoka Women's University, ²Laboratory of Toxicology and Pharmacology, University of Leuven, ³Venom and Toxin Research Program, Faculty of Medicine, National University of Singapore)
- P-048** Properties of nucleic acid duplex binding peptides which control the nuclease activity
Yusuke Maeda^{1,2}, Rintaro Iwata^{1,2}, Takeshi Wada^{1,2} (¹Faculty of Pharmaceutical Sciences, Tokyo University of Science, ²JST-CREST)
- P-049** Design of nanodisc scaffold peptide (NSP)
Hirokazu Kariyazono¹, Wataru Shinmura¹, Kohei Tsuji¹, Teruhiko Baba², Akira Shigenaga¹, Akira Otake¹, Hiroyuki Saito¹ (¹Institute of Health Biosciences, The University of Tokushima Graduate School, ²Research Center for Stem Cell Engineering, National Institute of Advanced Industrial Science and Technology (AIST))
- P-050** Studies on identification of active sites of an inhibitory cyclic peptide against EGF receptor dimerization
Takaaki Mizuguchi¹, Yukako Yamazaki², Kazuya Kobayashi², Honami Ooe², Mika Iida², Ryunosuke Ninomiya², Kazuki Saito³, Kenichi Akaji², Hirokazu Tamamura¹ (¹Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, ²Department of Medicinal Chemistry, Kyoto Pharmaceutical University, ³Graduate School of Frontier Sciences, University of Tokyo)

- P-051** Structure-activity relationship of antitumor cyclic hexapeptide RA-VII
Yoh Noguchi¹, Hironao Yamada¹, Sakiko Mori¹, Takeshi Miyakawa¹, Ryota Morikawa¹, Satoshi Yokojima², Yukio Hitotsuyanagi², Koichi Takeya², Masako Takasu¹ (¹School of Life Sciences, Tokyo University of Pharmacy and Life Sciences, ²School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)
- P-052** Intermolecular interaction of human prion protein fragment peptides
Toshifumi Akizawa¹, Masanari Taniguchi¹, Aya Kojima^{1,2}, Takaya Nakai¹, Motomi Konishi¹ (¹Laboratory of Clinical Analytical Chemistry, Faculty of Pharmaceutical Sciences, Setsunan University, ²Laboratory of Bio-analytical Chemistry, College of Pharmaceutical Sciences, Ritsumeikan University)
- P-053** Transmembrane peptide oligomerization of JC virus agnoprotein facilitated by a disulfide bridge
Koushi Hidaka^{1,2}, Keiko Hojo^{1,2}, Shio Fujioka¹, Souichi Nukuzuma³, Yuko Tsuda^{1,2} (¹Faculty of Pharmaceutical Sciences, ²Cooperative Research Center for Life Sciences, Kobe Gakuin University, ³Department of Infectious Diseases, Kobe Institute of Health)
- P-054** Structure-activity relationships of mitocryptide-3 on the activation of neutrophilic cells
Kenta Nakashima, Takayuki Marutani, Tatsuya Hattori, Kosuke Noguchi, Yoshiaki Kiso, Hidehito Mukai (Laboratory of Peptide Science, Graduate School of Bio-Science, Nagahama Institute of Bio-Science and Technology)
- P-055** Investigation of ligand recognition mechanisms of receptors for mitocryptide-1
Koki Tsutsumi, Takayuki Marutani, Tatsuya Hattori, Yoshiaki Kiso, Hidehito Mukai (Laboratory of Peptide Science, Graduated School of Bio-Science, Nagahama Institute of Bio-Science and Technology)
- P-056** Activation of Torso receptor by its ligand, insect prothoracicotropic hormone
Tadafumi Konogami, Yiwen Yang, Mari H. Ogihara, Juri Hikiba, Hiroshi Kataoka, Kazuki Saito (Department of Integrated Biosciences, Graduate School of Frontier Sciences, University of Tokyo)
- P-057** Quantitative analysis of p53 hetero-tetramers for dominant negative effect in transcriptional activity
Yu Toguchi, Madoka Kanno, Toshiaki Imagawa, Kazuyasu Sakaguchi (Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University)
- P-058** Methylation of the tetramerization domain in tumor suppressor protein p53 by PRMT5
Natsumi Nakagawa, Junya Wada, Rui Kamada, Kazuyasu Sakaguchi (Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University)
- P-059** A disulfide bond-replacement strategy enables the efficient design of artificial therapeutic peptides
Yusuke Kono¹, Kazuhiro Aoki², Takashi Nakae¹, Miki Maeda^{1,2}, Yohei Okada³, Keiichi Ohya², Kazuhiro Chiba³ (¹Research and Development Division, Jitsubo Co., Ltd., ²Department of Bio-Matrix (Pharmacology), Tokyo Medical and Dental University, ³Department of Applied Biological Science, Tokyo University of Agriculture and Technology)
- P-060** Application of the axial iron ligand-mutant heme oxygenase for heme-binding analysis
Hideyuki Komatsu, Shinpei Yamamoto, Masataka Okuda, **Hiroshi Sakamoto** (Department of Bioscience & Bioinformatics, Kyushu Institute of Technology)
- P-061** Effect of glycogen synthase kinase 3 on the complex forming between growth factor receptor bound protein 14 and insulin receptor
Junichi Taira¹, Hiroshi Sakamoto², Yuichiro Higashimoto¹ (¹Department of Chemistry, Kurume University School of Medicine, ²Department of Bioscience and Bioinformatics, Graduate School of Computer Science and Systems Engineering, Kyushu Institute of Technology)

- P-062** Digestion of α -Synuclein fragment peptides with matrix metalloproteinases and inhibitory effect of copper ion
Toshifumi Akizawa¹, **Ava Kojima**^{1,2}, Chika Matsumura¹, Reiko Hirose¹, Masanari Taniguchi¹, Motomi Konishi¹, Hidenao Toyoda², Yuko Nagai² (¹Laboratory of Clinical Analytical Chemistry, Faculty of Pharmaceutical Sciences, Setsunan University, ²Laboratory of Bio-analytical Chemistry, College of Pharmaceutical Sciences, Ritsumeikan University)
- P-063** Elucidating the topology in the interaction of calmodulin-derived HLH3 and HLH4 peptides
Akihiko Oku, Toshihide Takeuchi, Daisuke Noshiro, Miki Imanishi, Shiroh Futaki (Institute of Chemical Research, Kyoto University)
- P-064** Functional evaluation of proline containing periodic peptide that induces formation of cell aggregation
Yudai Futaki¹, Yasuhiko Iwasaki¹, Yasuhiko Tabata², Yoshiaki Hirano¹ (¹Department of Chemistry and Materials Engineering, Faculty of Chemistry Materials and Bioengineering, Kansai University, ²Institute for Frontier Medical Sciences, Kyoto University)
- P-065** The molecular switching of ORL1 nociceptin receptor in activation/inactivation
Hirokazu Nishimura¹, Jinglan Li¹, Kaname Isozaki¹, Yuuki Takesue¹, Xiaohui Liu¹, Miki Shimohigashi², Shogo Inamine¹, Ayami Matsushima¹, **Yasuyuki Shimohigashi**¹ (¹Department of Chemistry, Faculty and Graduate School of Sciences, and Risk Science Research Center, Kyushu University, ²Division of Biology, Faculty of Science, Fukuoka University,)
- P-066** GPCR functional role of Phe-269 and Phe-221 in the molecular switching of ORL1 nociceptin receptor activation
Yuuki Takesue, Hirokazu Nishimura, Xiaohui Liu, Ayami Matsushima, Yasuyuki Shimohigashi (Laboratory of Structure-Function Biochemistry, Department of Chemistry, Faculty and Graduate School of Sciences, and Risk Science Research Center, Kyushu University)
- P-067** Receptor selectivity and specificity of a series of opioid peptides latent in the proenkephalin precursor protein
Yudai Motomatsu, Hirokazu Nishimura, Yuka Matsumoto, Yumi Kuramitsu, Shogo Inamine, Ayami Matsushima, Yasuyuki Shimohigashi (Laboratory of Structure-Function Biochemistry, Department of Chemistry, Faculty and Graduate School of Sciences, and Risk Science Research Center, Kyushu University)
- P-068** Control of the protein *trans* splicing using amino acid replacement
Akio Noda¹, Tsuyoshi Takahashi² (¹Division of Molecular Science, Faculty of Science and Technology, Gunma University, ²Advanced Scientific Research Leaders Development Unit, Gunma University)
- P-069** Design, synthesis and evaluation of water soluble curcumin analogs for BACE1 inhibitors
Hiroyuki Konno¹, Yuri Nikaido¹, Mamiko Nakadate¹, Hitoshi Endo¹, Satomi Ise¹, Akira Sanjoh², Kazuya Kobayashi³, Yasunao Hattori³, Kenichi Akaji³ (¹Department of Biochemical Engineering, Graduate School of Science and Technology, Yamagata University, ²R&D Center, Protein Wave Co., ³Department of Medicinal Chemistry, Kyoto Pharmaceutical University)
- P-070** Study on the plasmin inhibitors: Replacement of the P2 and P1' residues
Ayako Suzuki¹, Koushi Hidaka^{1,2}, Keigo Gohda³, Naoki Teno⁴, Keiko Wanaka⁵, **Yuko Tsuda**^{1,2} (¹Faculty of Pharmaceutical Sciences, ²Cooperative Research Center of Life Sciences, Kobe Gakuin University, ³Computer-Aided Molecular Modeling Research Center, Kansai, ⁴Faculty of Clinical Nutrition, Hiroshima International University, ⁵Research Projects on Thrombosis and Haemostasis)

- P-071** Structural analysis of SARS 3CL protease complexed with inhibitors containing aza-decalin isomer
Kenta Teruya¹, Yasuhiro Shimamoto², Yasunao Hattori², Kazuya Kobayashi², Akira Sanjoh³, Eiki Yamashita⁴, Atsushi Nakagawa⁴, Kenichi Akaji² (¹Graduate School of Medical Science, Kyoto Prefectural University of Medicine, ²Department of Medicinal Chemistry, Kyoto Pharmaceutical University, ³R&D Center, Protein Wave Co., ⁴Institute for Protein Research, Osaka University)
- P-072** Structure analysis of GLP-1 in DPC micelle
Sakiko Mori, Hironao Yamada, Yoh Noguchi, Takeshi Miyakawa, Ryota Morikawa, Takuya Watanabe, Masako Takasu (School of Life Sciences, Tokyo University of Pharmacy and Life Sciences)
- P-073** Synthesis and conformational analysis of helical oligomers with a changeable chiral acetal moiety
Ryo Eto¹, Makoto Oba¹, Atsushi Ueda¹, Naoko Ishikawa², Masaaki Kurihara³, Yosuke Demizu³, Hiroshi Suemune², Mitsunobu Doi⁴, Masakazu Tanaka¹ (¹Graduate School of Biomedical Sciences, Nagasaki University, ²Graduate School of Pharmaceutical Sciences, Kyushu University, ³National Institute of Health Sciences, ⁴Osaka University of Pharmaceutical Sciences)
- P-074** Synthesis and secondary structure analysis of peptides having α,α -disubstituted α -amino acids with an acetal moiety
Kotomi Toyama, Opiyo George Ouma, Makoto Oba, Masakazu Tanaka (Graduate School of Biomedical Sciences, Nagasaki University)
- P-075** Theoretical study on the origin of substrate specificity of ADP based on the first-principles calculations 2
Erika Ishitsubo¹, Seiji Okazaki^{2,3}, Shogo Nakano^{2,3}, Hiroaki Tokiwa^{1,3,4}, Yasuhisa Asano^{2,3} (¹Department of Chemistry, Rikkyo University, ²Biotechnology Research Center and Department of Biotechnology, Toyama Prefectural University, ³JST, ERATO, Asano Active Enzyme Molecule Project, ⁴Research Center for Smart Molecules, Rikkyo University)
- P-076** Estimation of α -helix stability in water using molecular dynamics simulation
Koji Inai, Masahito Oka (Laboratory of Biomolecular Science, Faculty of Liberal Arts and Sciences, Osaka Prefecture University)
- P-077** Theoretical reflection on the conformational characters of polypeptides having charged side-chain groups
Koji Inai¹, Yoshiaki Hirano², **Masahito Oka**¹ (¹Faculty of Liberal Arts & Sciences, Osaka Prefecture University, ²Faculty of Chemistry, Materials and Bioengineering, Kansai University)
- P-078** Theoretical reflection on the conformational characters of proline-rich periodic polypeptides
Koji Inai¹, Yoshiaki Hirano², **Masahito Oka**¹ (¹Faculty of Liberal Arts & Sciences, Osaka Prefecture University, ²Faculty of Chemistry, Materials and Bioengineering, Kansai University)
- P-079** Structural study of TM4SF5-directed activation of FAK using NMR
Do-Hee Kim, Sun-Bok Jang, **Bong Jin Lee** (Seoul National University)
- P-080** Canceled
- P-081** Structural characterization of HP1264 reveals a novel fold for the FMN binding protein
Hyung-Jun Park, Ki-Young Lee, Ji-Hun Kim, Kyu-Yeon Lee, Jiyun Lee, Ingyun Lee, Ye-Ji Bae, Bong-Jin Lee (Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University)
- P-082** Metastable ions of peptides observed in MALDI-TOF MS -- Application for protein identification
Yang Wang, Yoshihito Okamura, Etsuko Nakajima, Toshifumi Takao (Institute for Protein Research, Osaka University)

- P-083** Dynamic conformation switching of helical peptide-oligo(phenylene ethynylene) conjugate
Taichi Ito, Shunsaku Kimura (Department of Material Chemistry, Graduate School of Engineering, Kyoto University)
- P-084** Infrared study on the Ca²⁺-bound coordination structures of tobacco calmodulin: Synthetic peptide analogues corresponding to the sites I-IV
Masayuki Nara¹, Takuya Miyakawa², Masaru Tanokura², Kazuyuki Kuchitsu³, Takashi Shimizu⁴, Hisayuki Morii⁴ (¹Laboratory of Chemistry, College of Liberal Arts and Sciences, Tokyo Medical and Dental University, ²Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, University of Tokyo, ³Department of Applied Biological Science, Tokyo University of Science, ⁴Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology)
- P-085** Synchrotron-infrared microscopy analysis of amyloid fibrils of calcitonin peptide irradiated by free-electron laser tuned to amide I band
Takayasu Kawasaki¹, Toyonari Yaji², Takayuki Imai¹, Toshiaki Ohta², Koichi Tsukiyama¹ (¹IR FEL Research Center, Research Institute for Science and Technology, Tokyo University of Science, ²SR Center, Research Organization of Science and Technology, Ritsumeikan University)
- P-086** Optimization of neurokinin-3 receptor (NK3R)-selective agonists
Koki Yamamoto¹, Shinya Oishi¹, Ryosuke Misu¹, Taro Noguchi¹, Hiroaki Ohno¹, Takashi Yamamura², Hiroaki Okamura², Nobutaka Fujii¹ (¹Graduate School of Pharmaceutical Sciences, Kyoto University, ²Animal Physiology Research Unit, National Institute of Agrobiological Sciences)
- P-087** Development of cyclic didehydridepeptide-type novel anti-microtubule agents possessing 2-pyridyl and benzophenone structures
Yoshiki Hayashi¹, Haruka Takeno¹, Daiki Nakazawa¹, Takumi Chinen², Kyohei Muguruma¹, Kohei Okuyama³, Akihiro Taguchi¹, Kentaro Takayama¹, Fumika Yakushiji¹, Masahiko Miura³, Takeo Usui², Yoshio Hayashi¹ (¹Department of Medicinal Chemistry, Tokyo University of Pharmacy and Life Sciences, ²Graduate School of Life and Environmental Sciences, University of Tsukuba, ³Section of Oral Radiation Oncology, Department of Oral Health Science, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University)
- P-088** Preparation of disulfide type prodrug of plinabulin for antibody-drug conjugate
Kyohei Muguruma¹, Ryosuke Kawamata¹, Daichi Akiyama¹, Risako Arima¹, Akihiro Taguchi¹, Kentaro Takayama¹, Fumika Yakushiji¹, Takeshi Fukuhara², Tetsuro Watabe², Yuji Ito³, Yoshio Hayashi¹ (¹Department of Medicinal Chemistry and ²Laboratory of Oncology, School of Life Sciences, Tokyo University of Pharmacy and Life Sciences, ³Department of Chemistry and Bioscience, Graduate School of Science and Engineering, Kagoshima University)
- P-089** Structure-activity relationship studies of the peptidic inactivators of histone demethylase LSD1
Taeko Kakizawa¹, Yosuke Ota², Yukihiko Itoh², Takayoshi Suzuki² (¹Department of Chemistry and Biochemistry, School of Advanced Science and Engineering, Waseda University, ²Graduate School of Medical Science, Kyoto Prefectural University of Medicine)
- P-090** Truncation studies of histone H3 peptide analogs as lysine-specific demethylase 1 inactivators
Taeko Kakizawa¹, Yosuke Ota², Yukihiko Itoh², Takayoshi Suzuki² (¹Department of Chemistry and Biochemistry, School of Advanced Science and Engineering, Waseda University, ²Graduate School of Medical Science, Kyoto Prefectural University of Medicine)

- P-091** Peptide mimetics targeting Polo-box domain of Polo-like kinase 1
Jeong-Kyu Bang¹, Mija Ahn¹, Kyung S Lee² (¹Division of Magnetic Resonance Research, Korea Basic Science Institute, ²Center for Cancer Research, National Cancer Institute, National Institute of Health)
- P-092** Structure-activity relationships of the intramolecular disulfide bonds in coprisin, a defensin from the dung beetle
Jaeho Lee, Jae-Ha Ryu, Ji-Yeong Sim, Bonggyu Park, Jaehyun Kim, Jae Il Kim (Gwangju Institute of Science and Technology)
- P-093** A novel detection method for pathogens using antimicrobial peptides
Tatsuyuki Koshiyama¹, Satoshi Tomisawa¹, Takashi Kikukawa¹, Yasuhiro Kumaki¹, Masakatsu Kamiya¹, Keiichi Kawano^{1,2}, Makoto Demura¹, Tomoyasu Aizawa¹ (¹Graduate School of Life Science, Hokkaido University, ²Chitose Institute of Science and Technology)
- P-094** Identification of proglucagon (ProGL) secreted from a duodenal cancer cell line
Naoki Sakura¹, Tomomi Ide¹, Kanako Wakabayashi-Nakao¹, Keiichi Hatakeyama¹, Keiichi Ohshima¹, Shun-ichiro Ogura², Tohru Mochizuki¹ (¹Medical Genetics Division, Shizuoka Cancer Center Research Institute ²Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology)
- P-095** Exploring of peptides with affinity to HER2 from random peptide libraries using radioisotope: Random hexapeptide libraries with fixed amino acid sequence at 1 and 2 positions
Ichiro Sasaki¹, Hirofumi Hanaoka², Keiichi Yamada³, Shigeki Watanabe¹, Yumi Sugo¹, Yasuhiro Ohshima¹, Hiroyuki Suzuki¹, Noriko S. Ishioka¹ (¹Medical Radioisotope Application Group, Quantum Beam Science Center, Japan Atomic Energy Agency, ²Department of Bioimaging Information Analysis, Gunma University, ³Department of Chemistry and Chemical Biology, Gunma University)
- P-096** Cell adhesion-mediated drug resistance (CAM-DR) in acute myelogenous leukemia cells and its abrogation by the antiadhesive peptide FNIII14
Taro Mizunuma, Takuya Iyoda, Fumio Fukai (Department of Molecular Patho-Physiology, Faculty of Pharmaceutical Sciences, Tokyo University of Science)
- P-097** Development of universal phage vaccine displaying extracellular domains of M2e derived from human influenza A viruses.
Ryohei Shioya¹, Ryuji Miyahara¹, Yoshitsugu Shoji¹, Kazuhisa Sugimura², Shuhei Hashiguchi¹ (¹Department of Chemistry and Biotechnology, and Chemical Engineering, Kagoshima University, ²Graduate School of Medical and Dental Sciences, Kagoshima University)
- P-098** Synthesis of macrotricyclic library for finding of target-specific binders
Yoshinari Arai, Masumi Taki (Department of Engineering Science, Bioscience and Technology Program, The Graduate School of Informatics and Engineering, The University of Electro-Communications)
- P-099** Artificial macrocycle as functional-equivalent of catalytic protein
Hiroaki Inoue, Rika Asano, Masumi Taki (Department of Engineering Science, Bioscience and Technology Program, The Graduate School of Informatics and Engineering, The University of Electro-Communications (UEC))
- P-100** Design of helix-loop-helix peptide inhibitor for p53-HDM2 interaction
Hidekazu Kitada, Masahiro Oguri, Daisuke Fujiwara, Ikuo Fujii (Department of Biological Science, Graduate School of Science, Osaka Prefecture University)
- P-101** Tumor growth inhibition by anti-VEGF microantibody
Masatak Michigami¹, Zhengmao Ye¹, Yasuhiko Koezuka², Ikuo Fujii¹ (¹Graduate School of Science, Osaka Prefecture University, ²Interprotein Corporation)

- P-102** Epitope mapping of monoclonal antibodies targeting the loop region of *Plasmodium falciparum* enolase
Hiroyuki Oku¹, Risa Onishi¹, Yudai Kimoto¹, Utako Arai¹, Keiichi Yamada¹, Kazuo Shinozuka¹, Kazuhiko Yano², Shigeyuki Kano² (¹Division of Molecular Science, Graduate School of Science & Engineering, Gunma University, ²Research Institute, National Center for Global Health & Medicine)
- P-103** Regulation of ILKAP phosphatase activity by lipid molecules
Nanase Tsukahara, Yuhei Kiyota, Yukiko Shirahata, Kazuyasu Sakaguchi (Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University)
- P-104** Dicer nuclease promoted production of let7a-1 microRNA is enhanced in the presence of tryptophan containing amphiphilic peptides
Soonsil Hyun, Jaehoon Yu (Seoul National University)
- P-105** An *in silico* genomic search of endomorphin-like opioid peptides
Ayami Matsushima¹, Kanako O. Koyanagi², Hirokazu Nishimura¹, Shogo Inamine¹, Yudai Motomatsu¹, Yasuyuki Shimohigashi¹ (¹Laboratory of Structure-Function Biochemistry, Department of Chemistry, Faculty and Graduate School of Sciences, and Risk Science Research Center, Kyushu University, ²Graduate School of Information Science and Technology, Hokkaido University.)
- P-106** Identifying membrane proteins involved in cellular uptake of octaarginine peptide by photocrosslinking
Yoshimasa Kawaguchi¹, Keiko Kuwata², Toshihide Takeuchi¹, Shiroh Futaki¹ (¹Institute for Chemical Research, Kyoto University, ²Institute of Transformative Bio-Molecules, Nagoya University)
- P-107** Interaction of acidic liposome with *N*-lauroyl membrane affinity peptide
Tetsuya Marume¹, Akihiro Tashiro², Junko Kuwahara², Hajime Mita² (¹Graduate School of Engineering, Fukuoka Institute of Technology, ²Faculty of Engineering, Fukuoka Institute of Technology)
- P-108** Design of protease-activable cyclic peptide nucleic acid
Seiji Sakamoto, Yasuyuki Araki, Takehiko Wada (Institute of Multidisciplinary Research for Advanced Materials, Tohoku University)
- P-109** Canceled
- P-110** Synthesis and analysis of intracellular molecular dynamics of novel fluorescent probe having myristoylated peptide
Shuhei Toyofuku¹, Haruka Morita¹, Setsuko Ando¹, Kentaro Okuma¹, Noriyoshi Nagahora¹, Yasunori Aizawa², Hiroyuki Nakagawa³, Kosei Shioji¹ (¹Department of Chemistry, Faculty of Science, Fukuoka University, ²Center for Biological Resources and Informatics, Tokyo Institute of Technology, ³Department of Earth System Science, Faculty of Science, Fukuoka University.)
- P-111** The study of labeling method using [¹⁸F] fluoromethionine for peptide imaging
Hiroshi Yamaguchi (PET Molecular Imaging Team, Akita Research Institute for Brain and Blood Vessels)
- P-112** Detection of boron containing amino acids and peptides by fluorescent boron-sensor
Yoshihide Hattori, Miki Ishimura, Youichirou Ohta, Hiroshi Takenaka, Mitsunori Kirihata (Research Organization for the 21st Century, Osaka Prefecture University)
- P-113** Evaluation of a specific peptide substrate for membrane-type 1 matrix metalloproteinase
Masanari Taniguchi¹, Ryuji Iemura¹, Aya Kojima^{1,2}, Motomi Konishi¹, Toshifumi Akizawa¹ (¹Laboratory of Clinical Analytical Chemistry, Faculty of Pharmaceutical Sciences, Setsunan University, ²Laboratory of Bio-analytical Chemistry, College of Pharmaceutical Sciences, Ritsumeikan University)

- P-114** *In vitro* studies on cellular binding and stability of ^{64}Cu -labeled peptide for tumor imaging
Yumi Sugo, Yasuhiro Ohshima, Ichiro Sasaki, Noriko S. Ishioka (Quantum Beam Science Center, Japan Atomic Energy Agency)
- P-115** Design of highly reactive peptide tag for protein functional analysis
Ei-ichi Tabata, Hirokazu Tabata, Leng Qiao, Munetsugu Kido, **Akio Ojida** (Graduate School of Pharmaceutical Sciences, Kyushu University)
- P-116** Infrared studies on amyloid structure of insulin
Hisayuki Morii¹, Masayuki Nara², Shu Konakahara^{1,3}, Takashi Tsuji³, Takashi Shimizu¹ (¹Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), ²Laboratory of Chemistry, College of Liberal Arts and Sciences, Tokyo Medical and Dental University, ³Research Institute for Science and Technology, Tokyo University of Science)
- P-117** Aggregation of amyloid β -peptides on GM1 ganglioside-express cell membranes
Naoya Itoh, Yoshiaki Yano, Katsumi Matsuzaki (Graduate School of Pharmaceutical Sciences, Kyoto University)
- P-118** β -Amyloid aggregation inhibitors possessing a turn mimic template
Yoshio Hamada¹, Naoko Miyamoto², Yoshiaki Kiso³ (¹Faculty of Pharmaceutical Sciences, Kobe Gakuin University, ²Faculty of Pharmaceutical Sciences, Kyoto Pharmaceutical University, ³Department of Bio-Science, Nagahama Institute of Bio-Science and Technology)
- P-119** Construction and evaluation of antibodies that binds to amyloid β -peptide using engineered fluorescent proteins as antigens
Narumi Tanaka¹, Tsuyoshi Takahashi² (¹Division of Molecular Science, Faculty of Science and Technology, Gunma University, ²Advanced Scientific Research Leaders Development Unit, Gunma University)
- P-120** Polyamine-acrolein cyclization products inhibit fibrillation of amyloid- β -peptide
Ayumi Tsutsui¹, Tamotsu Zako², Tong Bu², Yoshiki Yamaguchi³, Mizuo Maeda², Katsunori Tanaka¹ (¹Biofunctional Synthetic Chemistry Laboratory, RIKEN, ²Bioengineering Laboratory, RIKEN, ³Global Research Cluster, RIKEN)
- P-121** Acrolein detection by *in vivo* synthetic chemistry: Unexplored reactivity of acrolein with azide
Elena Saigibatalova^{1,2}, Ambara Pradipta¹, Misako Taichi¹, Almira Kurbangalieva², Katsunori Tanaka^{1,2} (¹Biofunctional Synthetic Chemistry Laboratory, RIKEN, ²A. Butlerov Institute of Chemistry, Kazan Federal University)
- P-122** Detection of interaction between Pin1 protein and peptides by a detection system using enzyme reconstitution
Akinori Saito¹, Tsuyoshi Takahashi² (¹Division of Molecular Science, Faculty of Science and Technology, Gunma University, ²Advanced Scientific Research Leaders Development Unit Gunma University)
- P-123** Construction of HER2-binding molecules using $\alpha 3\beta 3$ *de novo* protein scaffolds
Haruka Sakuma¹, Tsuyoshi Takahashi² (¹Division of Molecular Science, Faculty of Science and Technology, Gunma University, ²Advanced Scientific Research Leaders Development Unit, Gunma University)
- P-124** Molecular design of protein kinase inhibitors: Conjugation of ATP-competitive molecules with kinase surface-targeted peptides
Ryo Takayama, Daisuke Fujiwara, Ikuo Fujii (Department of Biological Science, Graduate School of Science, Osaka Prefecture University)

- P-125** Isolation of anti-VEGF neutralizing microantibodies from phage-displayed peptide library
Miho Suzuki, Masataka Michigami, Zhengmao Ye, Ikuo Fujii (Department of Biological Science, Graduate School of Science, Osaka Prefecture University)
- P-126** Effect of spacer between peptide and polysaccharide, on the biological activity of peptide-polysaccharide matrices
Jun Kumai, Fumihiko Katagiri, Kentaro Hozumi, Yamato Kikkawa, Motoyoshi Nomizu (Laboratory of Clinical Biochemistry, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)
- P-127** Endothelial cell adhesion on EPTFE substrate immobilized with REDV peptide via tyrosine residue
Sachiro Kakinoki, Atsushi Mahara, Tetsuji Yamaoka (Department of Biomedical Engineering, National Cerebral and Cardiovascular Center Research Institute)
- P-128** Coacervation property and structural analysis of synthetic dimer peptides of aromatic amino acid containing elastin-derived peptides
Keitaro Suyama¹, Daiki Tatsubo², Suguru Taniguchi³, Hitoshi Kesamaru², Iori Maeda³, Takeru Nose^{1,2} (¹Faculty of Arts and Science, Kyushu University, ²Department of Chemistry, Faculty and Graduate School of Sciences, Kyushu University, ³Department of Bioscience and Bioinformatics, Graduate School of Computer Science and Systems Engineering, Kyushu Institute of Technology)
- P-129** Silver nanoparticles formed by oligomeric biomineralization peptide conjugated with DNA
Tatsuya Sakaguchi, Shinichiro Sasaki, Kenta Mine, Kazuyasu Sakaguchi (Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo 060-0810, Japan)
- P-130** Anisotropic growth of gold nanocrystals within the interior cavity of a self-assembled peptide nanoarchitecture
Kin-ya Tomizaki, Kohei Kishioka, Hiroki Kobayashi, Megumi Kasuno, Takahito Imai (Department of Materials Chemistry, Ryukoku University)
- P-131** Site-specific mineralization of silica and calcium on DNAs using a designed peptide
Kenji Usui¹, Hiroto Nishiyama¹, Aoi Yamada¹, Makoto Ozaki¹, Takaaki Tsuruoka¹, Kin-ya Tomizaki² (¹Faculty of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University, ²Innovative Materials and Processing Research Center and Department of Materials Chemistry, Ryukoku University)
- P-132** Carbon modification of titania nanoarchitectures fabricated by peptide templation for enhancement of photocatalytic activities
Kosei Uno, Takahito Imai, Kin-ya Tomizaki (Department of Materials Chemistry, Ryukoku University)
- P-133** Canceled
- P-134** Development of functional silk fiber using a silk-binding peptide, YN42
Megumi Sumitani¹, Rika Fujii-Muramatsu², Ai Asaoka², Masaomi Minaba², Hirofumi Watanabe², Ken-ichi Nakajima¹, Tetsuya Iizuka¹, Ken-ichiro Tatematsu¹, Hideki Sezutsu¹, **Jun Ishibashi**² (¹Transgenic Silkworm Research Unit, ²Insect Mimetics Research Unit, National Institute of Agrobiological Sciences)

- P-135** Experimental study on structure of artificial carbon nanomaterials binding peptide at interfaces
Sho Sugawara¹, Yusuke Momma², Norihisa Nakayama¹, Koichi Matsuo³, Ken-Ichi Sano^{1,2} (¹Graduate School of Environmental Symbiotic System Major, Nippon Institute of Technology, ²Department of Innovative Systems Engineering, Nippon Institute of Technology, ³Hiroshima Synchrotron Radiation Center, Hiroshima University)
- P-136** Alignment of side chains along peptide nanotube of cyclic β -peptide
Yuki Tabata, Shunsaku Kimura (Department of Material Chemistry, Graduate School of Engineering, Kyoto University)
- P-137** Over-expression of porcine and medaka proopiomelanocortin's using an artificial gene in *E. coli* cells.
Kazuki Koda¹, Tadafumi Konogami², Shigeru Shimamoto¹, Yuji Hidaka¹ (¹Graduate School of Science and Engineering Research, Kinki University, ²Graduate School of Frontier Sciences, University of Tokyo)
- P-138** Amphiphilic photofunctional pigments by introduction of hydrophilic moieties into the 17-propionate residue of chlorophyll derivatives
Yoshitaka Saga, Naoya Takahashi, Shogo Nagata, Hiroshi Okazaki (Faculty of Science and Engineering, Kinki University)
- P-139** Ubiquitination on an artificial RING finger as an E3 ligase
Kazuhide Miyamoto (Faculty of Pharmaceutical Sciences, Himeji Dokkyo University)
- P-140** Meta-analysis of pigment-binding amino acid residues in photosynthetic proteins
Toru Oba¹, Hitoshi Tamiaki² (¹Graduate School of Engineering, Utsunomiya University, ²Graduate School of Life Sciences, Ritsumeikan University)
- P-141** Directed evolution of tRNA-aminophosphonating ribozymes for ribosomal phosphono-peptide synthesis
Takashi Kawakami (Molecular Profiling Research Center for Drug Discovery, National Institute of Advanced Industrial Science and Technology)
- P-142** Proteomic mapping of biological complexes using directed ligand evolution and ultra-high sensitive mass spectrometry
Takashi Kawakami, Shungo Adachi, Koji Ogawa, Tomohisa Hatta, Naoki Goshima, Tai Kubo, Tohru Natsume (Molecular Profiling Research Center for Drug Discovery, National Institute of Advanced Industrial Science and Technology)
- P-143** Genome instability by overexpression of PPM1D phosphatase in cancer cells
Yoshiro Chuman¹, Akihiro Fujita², Sari Ogasawara², Yuuki Kozakai², Toshiaki Imagawa², Kazuyasu Sakaguchi² (¹Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Niigata University, ²Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University,)
- P-144** Histones as antimicrobial agents
Shawichi Iwamuro, Chihiro Tagai, Shuu Morita, Takayuki Shiraishi, Hiroaki Kawasaki (Department of Biology, Faculty of Science, Toho University)
- P-145** Elucidation of influential factor for heterologous productivity of the antimicrobial peptide, cecropin P1 using *Escherichia coli*
Chiharu Abe¹, Taichi Nakazumi¹, Beak Mihwa¹, Masakatsu Kamiya¹, Takashi Kikukawa¹, Keiichi Kawano^{1,2}, Makoto Demura¹, Tomoyasu Aizawa¹ (¹Graduate School of Life Science, Hokkaido University, ²Chitose Institute of Science and Technology)

- P-146** Alternative polyadenylation analyses of neuropeptide genes in bisphenol A-exposed hypoactive mouse brain
Makiko Sugiyama, Shouta Kajiyama, Tatsuya Saito, Eriko Uchimura, Yudai Motomatsu, Ayaka Matsuo, Ayami Matsushima, Yasuyuki Shimohigashi (Department of Chemistry, Faculty and Graduate School of Sciences, Risk Science Research Center, Kyushu University)
- P-147** Structural and molecular evolutionary analysis of the ligand-binding domain of forty-eight human nuclear receptors
Yutaka Matsuyama, Hirokazu Nishimura, Xiaohui Liu, Ayami Matsushima, Yasuyuki Shimohigashi (Laboratory of Structure-Function Biochemistry, Department of Chemistry, Faculty and Graduate School of Sciences, and Risk Science Research Center, Kyushu University)
- P-148** A novel method to identify and quantify the coactivator proteins that couple with human nuclear receptor: The use of interacting interface α -helix peptide for quantitative inhibition
Xiaohui Liu, Ayami Matsushima, Yasuyuki Shimohigashi (Laboratory of Structure-Function Biochemistry, Department of Chemistry, Faculty of Sciences, and Risk Science Research Center, Kyushu University)
- P-149** Synthesis of cyclophane pentamer linked with trypsin substrate
Kotaro Matsuki, Osamu Hayashida and Setsuko Ando (Department of Chemistry, Fukuoka University)