

# 5th International Peptide Symposium (5th IPS) Program

## Oral Sessions

### December 4th (Saturday), 2010

- 14:20~14:30      Opening Remarks
- 14:30~15:40      **Young Investigators' Symposium I**  
**Chair: Nobutaka Fujii**
- 14:30~14:40      **Y-01** Misako Taichi (Peptide Institute, Inc., Japan)  
Structure-Activity Relationship of Marinostatin, an ester-linked serine protease inhibitor
- 14:40~14:50      **Y-02** Gerbrand J. Van der Heden van Noort  
(Leiden University, The Netherlands)  
Synthesis of Nucleotidylated Amino Acids for Preparation of Nucleopeptides
- 14:50~15:00      **Y-03** Youhei Sohma (Kyoto Pharmaceutical University, Japan)  
Use of O-acyl isopeptides to identify new functions of amyloid beta peptides
- 15:00~15:10      **Y-04** Annemiek D. Knijnenburg (Leiden University, The Netherlands)  
Cyclic cationic antimicrobial peptides: Sugar Amino Acid  $\beta$ -turn modified Gramicidin S analogs are promising leads towards new antibiotics
- 15:10~15:20      **Y-05** Yuji Yamada  
(Tokyo University of Pharmacy and Life Science, Japan)  
Development of artificial basement membranes using peptide-polysaccharide complexes
- 15:20~15:30      **Y-06** Hendrik Eberhard (Humboldt University Berlin, Germany)  
Self-assembled bivalent binders of the Syk-tSH2 domain
- 15:30~15:40      **Y-07** Yuri Yamazaki  
(Tokyo University of Pharmacy and Life Sciences, Japan)  
Development of chemical probes towards the elucidation of binding mechanism of plinabulin, a cyclic dipeptide based anti-microtubule agent
- 15:40~15:50      Break
- 15:50~16:50      **Young Investigators' Symposium II**  
**Chair: John D. Wade and Hitoshi Ishida**
- 15:50~16:00      **Y-08** Yi-Pin Chang (University of Oxford, UK)  
Combinatorially Selected 4-mer Peptide Probes Inhibit the Pathogenic Polymerization of Alpha1-Antitrypsin
- 16:00~16:10      **Y-09** Yusuke Yamagishi (The University of Tokyo, Japan)  
Selection of cyclic N-methyl peptide inhibitors against human ubiquitin ligase E6AP using RaPID display
- 16:10~16:20      **Y-10** Carlos Mas-Murano (Technische Universitaet Muenchen, Germany)  
Investigation of integrin and osteoblast adhesion influenced by RGD-peptide coating and surface properties

- 16:20~16:30 **Y-11** Koichi Tanaka (Kagoshima University, Japan)  
Mimotope peptides of amyloid beta42 fibril-specific antibodies binding to amyloid plaques in brain section of alzheimer's disease model mouse, J20
- 16:30~16:40 **Y-12** Peter R. Wich (University of California Berkeley, USA)  
Surface Recognition and Inhibition of  $\beta$ -Tryptase by Tetravalent Peptide Ligands
- 16:40~16:50 **Y-13** Ryosuke Misu (Kyoto University, Japan)  
Functional Characterization of Kisspeptin Receptor Ligands: Activation of Neuropeptide FF Receptors
- 16:50~17:00 Break
- 17:00~18:10 **Young Investigators' Symposium III**  
**Chair: James P. Tam and Takaki Koide**
- 17:00~17:10 **Y-14** Koji Ohara (Kyoto University, Japan)  
Antitumor effect of the EGFR-lytic hybrid peptide in animal model of human cancers with K-ras mutation
- 17:10~17:20 **Y-15** Frederic Tewes (Trinity College Dublin, Ireland)  
Effect of PEG type and HP $\beta$ CD on salmon calcitonin biopharmaceutical properties following pulmonary delivery
- 17:20~17:30 **Y-16** Yuki Goto (The University of Tokyo, Japan)  
New strategies for genetic code reprogramming; dual genetic code and artificial division of codon boxes
- 17:30~17:40 **Y-17** Henri G. Franquelim (University of Lisbon, Portugal)  
Interaction of anti-HIV-1 antibodies with gp41 MPER peptide at the lipid membrane level - mode of action unravelled by combined microscopy approaches
- 17:40~17:50 **Y-18** Chie Kojima (Osaka Prefecture University, Japan)  
Temperature-Dependent Self-Assembly of Collagen-Mimic Dendrimers with Pro-Hyp-Gly Repeats
- 17:50~18:00 **Y-19** Linda J. Chan (The University of Melbourne, Australia)  
Design, synthesis and in vitro characterization of RXFP-1 specific human relaxin analogues
- 18:00~18:10 **Y-20** Gen Tanaka (Kyoto University, Japan)  
Identification of a receptor responsible for cellular uptake of R12 peptide
- 18:20~18:50 **Japanese Peptide Society Young Investigator Award Lectures**  
**Chair: Shiroh Futaki**
- 18:20~18:35 **YA-1** Kentaro Hozumi  
(Tokyo University of Pharmacy and Life Sciences, Japan)  
Development of functional biomaterials using laminin active peptides
- 18:35~18:50 **YA-2** Tsuyoshi Takahashi (Tokyo Institute of Technology, Japan)  
Construction and characterization of artificial peptides and proteins that recognize specific biomolecules
- Evening:  
19:00~20:30 Welcome Reception

## December 5th (Sunday), 2010

Morning:

8:50~10:00

### Session 1

**Chair: Horst Kessler and Toshimasa Yamazaki**

8:50~9:15

**L-01** Harold A. Scheraga (Cornell University, USA)

Peptide Guide to Protein Folding

9:15~9:30

**L-02** Yuji Kobayashi

(Osaka University of Pharmaceutical Sciences, Japan)

Detailed mechanism of conformational transition of collagen peptides with triple helical structure

9:30~9:45

**L-03** Takeshi Sato (Osaka University, Japan)

Solid state NMR study on the dimer structure of the transmembrane region of amyloid precursor protein

9:45~10:00

**L-04** Assaf Friedler (The Hebrew University of Jerusalem, Israel)

Shiftides: Using peptides to modulate the oligomerization equilibrium of proteins

10:00~10:25

Break

10:25~11:00

### Special Lecture I

**Chair: Yuji Kobayashi**

**SL-1** Kurt Wüthrich

(Swiss Federal Institute of Technology Zurich, Switzerland)

Prion Diseases and Dynamic Conformational Polymorphisms in Cellular Prion Proteins

11:05~12:35

### Session 2

**Chair: Jean Martinez and Katsumi Matsuzaki**

11:05~11:30

**L-05** Horst Kessler (Technische Universität Munchen, Germany)

The functional role of helical regions in proteins for regulating their stability and binding properties to partner proteins

11:30~11:55

**L-06** Gilles Guichard

(Centre National de la Recherche Scientifique, France)

Urea-based oligomers as peptide mimics: Connecting structure and function

11:55~12:20

**L-07** Brian M. Austen (St. George's University of London, UK)

$\beta$ -Amyloid oligomers and their role in the pathogenesis and diagnosis of Alzheimer's disease

12:20~12:35

**L-08** Lukasz Berlicki (Wroclaw University of Technology, Poland)

Exploration of cis-pentacin containing peptides as foldamers

12:35~14:35

Lunch (On your own)

12:45~14:05

Luncheon Seminar (Hosted by Biotage Japan)

Afternoon:

14:35~15:25

### Session 3

**Chair: Ernest Giralt and Hisakazu Mihara**

14:35~14:55

**L-09** Shunsaku Kimura (Kyoto University, Japan)

Novel morphologies by self-assembling of chiral amphiphilic peptides

- 14:55~15:10 **L-11** Hitoshi Ishida (Kitasato University, Japan)  
Peptide Origami: Molecular Design, Synthesis and their Application
- 15:10~15:25 **L-12** Jan Raap (Leiden University, The Netherland)  
Alamethicin, a structural and functional peptide fossil of protein ion channels?
- 15:25~15:50 Break
- 15:50~17:10 **Session 4**  
**Chair: Joel P. Schneider and Shunsaku Kimura**
- 15:50~16:15 **L-13** Jean Martinez (Université Montpellier, France)  
Synthesis and cellular uptake quantification of short constrained uncharged cell penetrating non peptides (CPNP)
- 16:15~16:40 **L-14** Paul A. Wender (Stanford University, USA)  
Nanomedicine: New peptide inspired molecular transporters for drug delivery and treating resistant disease; synthesis, cellular uptake and human ex vivo studies
- 16:40~16:55 **L-15** Shiroh Futaki (Kyoto University, Japan)  
Design and Creation of Metal-responsive DNA-binding Proteins
- 16:55~17:10 **L-16** Burkhard Bechinger  
(University of Strasbourg/CNRS, France)  
Structural and biophysical investigations of new family of transfection peptides with potent DNA and siRNA delivery activities
- 17:20~18:50 Poster Session Y & P1 (Odd numbers)
- Evening:  
19:00~21:00 Speakers' Dinner (at Grand Prince Hotel Kyoto, Invitation Only)

## December 6th (Monday), 2010

Morning:

- 8:30~10:10 **Session 5**  
**Chair: Kit S. Lam and Yasuyuki Shimohigashi**
- 8:30~8:55 **L-17** Richard A. Houghten  
(Torrey Pines Institute for Molecular Studies, USA)  
High-throughput in vivo screening of mixture-based combinatorial libraries: identification of novel analgesics
- 8:55~9:15 **L-18** Masahiko Sisido (Okayama University, Japan)  
Multi-labeled fluorescent peptide library for in situ screening against cancer cells
- 9:15~9:30 **L-19** Su Seong Lee  
(Institute of Bioengineering and Nanotechnology, Singapore)  
New strategies for development of high affinity protein capture agents through screening of OBOC peptide libraries
- 9:30~9:55 **L-20** Morten Meldal (Carlsberg Research Center, Denmark)  
Click-bonds: Functional replacement of disulfide and amide bonds with triazoles in bioactive peptides

- 9:55~10:10 **L-21** Kiyoshi Nokihara (HiPep Laboratories, Japan)  
Design and syntheses of peptides as bio-sensor elements which can detect the structural change of prion proteins
- 10:10~10:35 Break
- 10:35~12:15 **Session 6**  
**Chair: Samuel H. Gellman and Kazuyasu Sakaguchi**
- 10:35~11:00 **L-22** Joel P. Schneider (National Cancer Institute at Frederick, USA)  
Design and application of material forming peptides: From antibacterials to mammalian cell delivery
- 11:00~11:15 **L-23** Hisakazu Mihara (Tokyo Institute of Technology, Japan)  
Designed peptide libraries for protein and cell analyses
- 11:15~11:40 **L-24** Ernest Giralt (University of Barcelona, Spain)  
New challenges in studying ligand-protein interactions
- 11:40~12:00 **L-25** Jean Chmielewski (Purdue University, USA)  
Designer Collagen Peptide Materials for Regenerative Medicine
- 12:00~12:15 **L-26** Masayuki Haramura  
(Chugai Pharmaceutical Company Limited, Japan)  
Optimizing quantitative analysis of phosphopeptides with isobaric tags to dissect the phosphorylation signal pathways
- 12:15~14:00 Lunch (On your own)  
12:25~13:45 Luncheon Seminar (Hosted by CEM)
- Afternoon:  
14:00~15:35 **Session 7**  
**Chair: Geoffrey Tregear and Kenichi Akaji**
- 14:00~14:25 **L-27** Samuel H. Gellman (University of Wisconsin-Madison, USA)  
Inhibiting protein-protein interactions with peptidic foldamers
- 14:25~14:45 **L-28** Itaru Hamachi (Kyoto University, Japan)  
Chemistry-based protein labeling and imaging in cell and in vivo
- 14:45~15:05 **L-29** Garland R. Marshall (Washington University, USA)  
Preorganization and Peptidomimetic Design
- 15:05~15:20 **L-30** Katsumi Matsuzaki (Kyoto University, Japan)  
Internalization and oligomerization of membrane receptors in living cells as detected by novel coiled-coil fluorescence labeling method
- 15:20~15:35 **L-31** Philippe Karoyan (CNRS, France)  
Prolinoamino acids: tools in mimetics design targeting somatostatin receptors and IAP/Smac interactions. Structural and pharmacological applications
- 15:35~16:00 Break
- 16:00~17:20 **Session 8**  
**Chair: Garland R. Marshall and Motoyoshi Nomizu**
- 16:00~16:25 **L-32** Uhtaek Oh (Seoul National University, Korea)  
Anoctamin 1, a cloned-Ca<sup>2+</sup> activated chloride channel and its pathophysiological implications

- 16:25~16:45 **L-33** Yasuyuki Shimohigashi (Kyushu University, Japan)  
Structure-activity studies on nociceptin and its receptor ORL1
- 16:45~17:05 **L-34** Kit S. Lam (University of California Davis, USA)  
Peptide-based targeting nanoparticles for cancer therapy and imaging
- 17:05~17:20 **L-35** Yong Y. Lin (Columbia University, USA)  
Elastase Derived Peptides in Chronic Obstructive Pulmonary Disease (COPD)
- 17:30~19:00 Poster Session Y & P1 (Even numbers)

## December 7th (Tuesday), 2010

Morning: Joint Sessions with the Japan Branch of the International Neuropeptide Society

- 8:30~8:35 Opening Remark of Joint Sessions
- 8:35~10:05 **Session 9**  
**Chair: Annette G. Beck-Sickinger and Masaaki Yoshikawa**
- 8:35~8:55 **L-36** Masaaki Yoshikawa (Kyoto University, Japan)  
Neuroactive peptides derived from food proteins
- 8:55~9:20 **L-37** Ben O. de Lumen (University of California, Berkeley, USA)  
Lunasin: A novel cancer preventive seed peptide
- 9:20~9:45 **L-38** A. Ian Smith (Monash University, Australia)  
Peptide acetylation in the brain: A powerful mechanism for regulating appetite, energy expenditure and weight
- 9:45~10:05 **L-39** Hidehito Mukai (Kyoto Pharmaceutical University, Japan)  
Cryptides: Non-classical bioactive peptides hidden in protein structures
- 10:05~10:30 Break
- 10:30~11:50 **Session 10**  
**Chair: Ian Smith and Kyung-Soo Hahm**
- 10:30~10:55 **L-40** Annette G. Beck-Sickinger (Leipzig University, Germany)  
Ligand induced internalization of neuropeptide Y receptors:  
Mechanism and application in tumor research
- 10:55~11:20 **L-41** Kyung-Soo Hahm (Chosun University, Korea)  
Antimicrobial peptides: An alternative solution for multi-drug resistant bacterial infections
- 11:20~11:35 **L-42** Jaw Kang Chang (Phoenix Pharmaceuticals Inc., USA)  
Isolation, identification, distribution and characterization of neuronostatin
- 11:35~11:50 **L-43** Ekaterina F. Kolesanova  
(Institute of Biomedical Chemistry RAMS, Russia)  
Development of peptide immunogens for anti-HCV vaccine
- 11:50~13:15 Lunch (On your own)  
Excursion

Afternoon: Joint Sessions with the Japan Branch of the International Neuropeptide Society

13:15~14:50

**Session 11**

**Chair: Naoto Minamino and Charlotte Erlanson-Albertsson**

13:15~13:40 **L-44** Charlotte Erlanson-Albertsson (Lund University, Sweden)

The role of enterostatin in eating behavior and diet

13:40~14:05 **L-45** Kazuwa Nakao (Kyoto University, Japan)

Translational research of novel hormones

14:05~14:25 **L-46** Hiroaki Ueno (University of Miyazaki, Japan)

Translational research of ghrelin

**Chair: Kazuwa Nakao**

14:25~14:50 **L-47** Kenji Kangawa

(National Cerebral and Cardiovascular Center Research Institute, Japan)

Discovery of ghrelin and its clinical application

14:50~15:10

Break

15:10~17:50

**Session 12**

**Chair: Kazuo Chihara and Weihong Pan**

15:10~15:30 **L-48** Takeshi Sakurai (Kanazawa University, Japan)

Orexin neurons at interface of energy homeostasis, emotion and sleep/wakefulness states

15:30~15:50 **L-49** Seiji Shioda (Showa University, Japan)

PACAP and neuronal cell death

15:50~16:15 **L-50** Weihong Pan (Pennington Biomedical Research Center, USA)

Leptin signaling in astrocytes

**Chair: Lloyd D. Fricker and Kazuhiro Takahashi**

16:15~16:35 **L-51** Naoto Minamino

(National Cerebral and Cardiovascular Center Research Institute, Japan)

Peptidomics-based discovery of bioactive peptides

16:35~17:00 **L-52** Lloyd D. Fricker (Albert Einstein College of Medicine, USA)

Peptidomics and novel bioactive peptides

17:00~17:25 **L-53** Jonathan V. Sweedler

(University of Illinois at Urbana-Champaign, USA)

Peptidomics: from discovery to function

**Chair: Naoto Minamino**

17:25~17:50 **L-54** Abba J. Kastin (Pennington Biomedical Research Center, USA)

Biologically active peptide concepts with emphasis on the blood-brain barrier

17:50~17:55 Closing Remark of Joint Sessions

**December 8th (Wednesday), 2010**

Morning:

8:30~10:05

**Session 13**

**Chair: Ferenc Hudecz and Hiroaki Suga**

8:30~8:55 **L-55** David J. Craik (The University of Queensland, Australia)

Discovery and applications of naturally occurring cyclic peptides

- 8:55~9:10 **L-56** Oliviero Gobbo (Trinity College Dublin, Ireland)  
Comparative in vivo evaluation of different delivery systems for the pulmonary administration of salmon calcitonin
- 9:10~9:35 **L-57** Yechiel Shai (The Weizmann Institute of Science, Israel)  
Antimicrobial peptides: Parameters involved in cell specificity, bacterial cell wall (LPS, LTA) detoxification and overcoming resistance mechanisms
- 9:35~9:50 **L-58** Bok-Luel Lee (Pusan National University, Korea)  
Different induction mechanisms of antimicrobial peptides in fly and beetle after challenge of Gram-negative bacteria
- 9:50~10:05 **L-59** Florante A. Quioco (Baylor College of Medicine, USA)  
Calmodulin-target peptide interactions
- 10:05~10:30 Break
- 10:30~11:05 **Special Lecture II**  
**Chair: Ettore Benedetti**  
**SL-2** Ada E. Yonath (The Weizmann Institute of Science, Israel)  
The striking ribosomal architecture: Nascent proteins voyage from making to initial folding
- 11:05~12:25 **Session 14**  
**Chair: David Craik and Masahiko Sisido**
- 11:05~11:25 **L-60** Hiroaki Suga (The University of Tokyo, Japan)  
Discovery of bioactive non-standard peptides powered by the RaPID system
- 11:25~11:45 **L-61** Alexander Wlodawer (National Cancer Institute, USA)  
Crystallographic investigations of the complexes of plasmepsins with peptidic inhibitors
- 11:45~12:10 **L-62** Ferenc Hudecz (Eötvös Loránd University, Hungary)  
Modulation of intracellular calpain activity by peptide-conjugates
- 12:10~12:25 **L-63** Hirokazu Tamamura  
(Tokyo Medical and Dental University, Japan)  
Novel tag-probe pairs for fluorescent imaging of proteins in living cells
- 12:25~14:10 Lunch (On your own)
- 12:30~14:00 International Liaison Committee Meeting
- Afternoon:
- 14:10~15:40 **Session 15**  
**Chair: Alexander Wlodawer and Koichi Fukase**
- 14:10~14:35 **L-64** Ernesto Freire (Johns Hopkins University, USA)  
Development of HIV-1 cell entry inhibitors
- 14:35~15:00 **L-65** James P. Tam (Nanyang Technological University, Singapore)  
Biologics as a New Class of Active Principles in Herbal Medicine
- 15:00~15:25 **L-66** Ben M. Dunn (University of Florida, USA)  
HIV-1 proteases from non-B-subtype virus: Inhibitor binding

- 15:25~15:40 **L-67** Ben Berkhout (University of Amsterdam, The Netherlands)  
Towards improved anti-HIV peptides that prevent viral escape
- 15:40~16:05 Break
- 16:05~17:25 **Session 16**  
**Chair: Ben M. Dunn and Hirokazu Tamamura**
- 16:05~16:30 **L-68** Jane V. Aldrich (The University of Kansas, USA)  
Development of systemically active peptides and potential for drug development
- 16:30~16:55 **L-69** Ettore Benedetti (Università di Napoli 'Federico II', Italy)  
Peptide-derivatized multimodal nanoparticles for targeted delivery in imaging and therapeutic applications
- 16:55~17:10 **L-70** Edouard Nice (Monash University, Australia)  
Quantitative MRM analysis of potential colorectal cancer biomarkers in human feces using proteotypic peptides identified by fecal proteomics
- 17:10~17:25 **L-81** Derek Macmillan (University College London, UK)  
Peptide thioester formation through controlled disruption of amide bonds
- 17:30~19:00 Poster Session P2 (Odd numbers)

## December 9th (Thursday), 2010

Morning:

- 8:30~10:15 **Session 17**  
**Chair: Stephen B. H. Kent and Akira Otaka**
- 8:30~8:55 **L-72** Dawei Ma (Shanghai Institute of Organic Chemistry, China)  
Synthesis and SAR studies towards cytotoxic peptide bisbromoamide and piperazimycin A
- 8:55~9:10 **L-87** Yoon-Sik Lee (Seoul National University, Korea)  
Recent Progress of Core-Shell Type Resins and Its Application to Solid-Phase Peptide Synthesis
- 9:10~9:25 **L-74** Artur Mucha (Wroclaw University of Technology, Poland)  
Synthesis and modifications of phosphinic inhibitors of leucine aminopeptidases
- 9:25~9:40 **L-75** Ashraf Brik (Ben-Gurion University, Israel)  
Advanced Chemical Tools to Study Ubiquitin Biology
- 9:40~9:55 **L-76** Hideo Iwai (University of Helsinki, Finland)  
Protein and peptide ligation by split inteins
- 9:55~10:15 **L-77** Hironobu Hojo (Tokai University, Japan)  
Glycoprotein synthesis using segment condensation method
- 10:15~10:40 Break
- 10:40~12:05 **Session 18**  
**Chair: Yoon-Sik Lee and Yasuhiro Kajihara**
- 10:40~11:05 **L-78** Philip E. Dawson (The Scripps Research Institute, USA)  
Dynamic chemistry in protein synthesis and conjugation

- 11:05~11:25 **L-79** Toru Kawakami (Osaka University, Japan)  
Peptide ligation via thioester formation at the cysteine residue
- 11:25~11:50 **L-80** Lei Liu (Tsinghua University, China)  
Development of methods for chemical synthesis of proteins
- 11:50~12:05 **L-71** Mariusz Skwarczynski  
(The University of Queensland, Australia)  
Self-adjuvanting peptide-based subunit nanovaccines
- 12:05~14:00 Lunch (On your own)
- Afternoon:  
14:00~15:30 Poster Session P2 (Even numbers)
- 15:45~17:30 **Session 19**  
**Chair: Jane V. Aldrich and Hironobu Hojo**
- 15:45~16:10 **L-83** William D. Lubell (Université de Montréal, Canada)  
Complementary relationships between lactam- and aza-peptide mimics
- 16:10~16:30 **L-84** Akira Otaka (The University of Tokushima, Japan)  
Development of amide bond cleavage device with application to chemical biology use
- 16:30~16:55 **L-85** Jeffrey W. Bode  
(Swiss Federal Institute of Technology Zurich, Switzerland)  
The alpha-ketoacid-hydroxylamine amide formation for chemoselective peptide ligation
- 16:55~17:15 **L-86** Yasuhiro Kajihara (Osaka University, Japan)  
Chemical synthesis of glycoproteins having human complex type oligosaccharides
- 17:15~17:30 **L-73** Takayuki Doi (Tohoku University, Japan)  
Total Synthesis, Biological Evaluation, and Binding Protein Network Analysis of Natural Product Cyclic Depsipeptides, Spiruchostatin A and Apratoxin A
- 17:30~18:00 **Akabori Memorial Award Lecture**  
**Chair: Saburo Aimoto**  
**AA-1** Stephen B. H. Kent (University of Chicago, USA)  
Mirror image proteins, enzymes, and hormones –  
The natural protein world dissected using chemistry
- Evening:  
18:30~ Banquet and Award Ceremony (at Grand Prince Hotel Kyoto)

# 5th International Peptide Symposium (5th IPS) Program

## Poster Sessions

- P1-001** **A Phosphorescent Molecular Sensor Based on Ruthenium-Peptide Complex: Synthesis and Photophysical Properties**  
Hitoshi Ishida<sup>1, 2)</sup>, Masashi Sameta<sup>1)</sup>, Shigero Oishi<sup>1)</sup>  
1) Department of Chemistry, Graduate School of Science, Kitasato University, Sagamihara, Japan,  
2) PRESTO, Japan Science and Technology Agency(JST), Kawaguchi, Japan
- P1-002** ***In vitro* selection of peptide aptamer binding to Vitamin B12**  
Wei Wang<sup>1, 2)</sup>, Shuta Hara<sup>1, 3)</sup>, Akira Wada<sup>1)</sup>, Mingzhe Liu<sup>1)</sup>, Toshiro Aigaki<sup>2)</sup>, Yoshihiro Ito<sup>1)</sup>  
1) Nano Medical Engineering Laboratory, RIKEN Advanced Science Institute, Wako, Japan,  
2) Graduate School of Biological Sciences, Tokyo Metropolitan University, Tokyo, Japan,  
3) Department of Materials and Applied Chemistry, Graduate School of Science and Technology, Nihon University, Tokyo, Japan
- P1-003** **Identification and Functional Characterization of Kunitz Type Toxins from New Guinean *Pseudechis australis***  
Hidetoshi Inagaki<sup>1)</sup>, Hikari Kimoto<sup>1)</sup>, Satoshi Ueno<sup>1)</sup>, Yoko Yamauchi<sup>1)</sup>, Michihisa Toriba<sup>2)</sup>, Tai Kubo<sup>1)</sup>  
1) Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology(AIST), Tsukuba, Japan,  
2) The Japan Snake Institute, Ohta, Japan
- P1-004** **Identification of binding regions of DAO and LG72**  
Chien-Ming Wang<sup>1)</sup>, Si-Yi Chen<sup>1, 2)</sup>, Yen-Ju Chen<sup>1, 3)</sup>, Guochuan E Tsai<sup>4)</sup>, Hsien-Yuan Lane<sup>5)</sup>,  
Johannes Scheng-Ming Tschen<sup>2, 6)</sup>, Hao-Teng Chang<sup>1, 5)</sup>  
1) Graduate Institute of Molecular Systems Biomedicine, China Medical University, Taichung, Taiwan, Republic of China,  
2) Master Programs of Life Science, College of Life Sciences, National Chung Hsin Univeristy, Taichung, Taiwan Republic of China,  
3) Department of Public Health, China Medical University, Taichung, Taiwan, Republic of China,  
4) Department of Psychiatry, Harbor-UCLA Medical Center Torrance, California 90509, USA,  
5) Graduate Institute of Clinical Medical Science, China Medical University, Taichung, Taiwan, Republic of China,  
6) Biotechnology Department, Ming Dao University, Taiwan, Republic of China
- P1-005** **Functional Studies on the Importance of C-terminal Truncation of Chemerin**  
Stephan Schultz, Annette G. Beck-Sickinger  
Institute of Biochemistry, Faculty of Bioscience, Pharmacy and Psychology, Leipzig University, Leipzig, Germany
- P1-006** **Neuropeptides and their receptors of ascidians: novel evolutionary and functional model for vertebrate neuropeptidergic systems**  
Honoo Satake, Tsuyoshi Kawada, Masato Aoyama, Toshio Sekiguchi, Tsubasa Sakai  
Suntory Inst. for Bioorg. Res., Osaka, Japan
- P1-007** **Dimerization of Adiponectin Receptor 1 is Inhibited by an Adiponectin Derived Peptide**  
Cathleen Juhl<sup>1)</sup>, David Kosel<sup>1)</sup>, John T. Heiker<sup>1)</sup>, Cornelia M. Wottawah<sup>1)</sup>, Matthias Blueher<sup>2)</sup>, Karin Moerl<sup>1)</sup>,  
Annette G. Beck-Sickinger<sup>1)</sup>  
1) Institute of Biochemistry, Faculty of Life Sciences, Pharmacy and Psychology, Leipzig University, Leipzig, Germany,  
2) Department of Internal Medicine III, Leipzig University, Leipzig, Germany
- P1-008** **Purification and characterization of potent antibacterial protein from human amniotic fluid**  
Jin-soon Park<sup>1)</sup>, Sang Joon Choi<sup>4)</sup>, Kyung-soo Hahm<sup>1, 2)</sup>, Yoonkyung Park<sup>1, 3)</sup>  
1) Research Center for Proteineous Materials(RCPM), Chosun University, Kwangju 501-759, Korea,  
2) Department of Cellular/Molecular Medicine School of Medicine, Chosun University, Kwangju 501-759, Korea,  
3) Department of Biotechnology and BK21 Research Team for Protein Activity Control, Chosun University, Kwangju 501-759, Korea,  
4) Department of Obstetrics and Gynecology, School of Medicine, Chosun University, Kwangju 501-759, Korea
- P1-009** **Lys-Leu rich peptide with antibacterial and synergistic effect against antibiotic resistant microorganisms isolated from patients with cholelithiasis**  
Jin-soon Park<sup>1)</sup>, Byoung Kwan Son<sup>2)</sup>, Joon Soo Hahm<sup>3)</sup>, Yoonkyung Park<sup>1, 4)</sup>, Kyung-soo Hahm<sup>1, 5)</sup>  
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- P1-010** **Antibacterial activity and their mechanism of action on the bacterial membrane of the peptides with an influence of alternating pattern of K and W residues**  
Ramamourthy Gopal<sup>1)</sup>, Kyung-soo Hahm<sup>1, 2)</sup>, Yoonkyung Park<sup>1, 3)</sup>  
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 3) Department of Biotechnology and BK21 Research Team for Protein Activity Control, Chosun University, Gwangju, Korea
- P1-011** **Translocation into the inner membrane of gram-negative bacteria by C-terminal amidation of PMAP-23**  
Ramamourthy Gopal, Kyung-soo Hahm, Yoonkyung Park  
 Research Center for Proteineous Materials(RCPM), Chosun University, Kwangju, Korea
- P1-012** **The Mode of Action of an Antimicrobial Peptide Isolated from *Pseudis paradoxa***  
Hyung Jong Na<sup>3)</sup>, Yoonkyung Park<sup>1, 3)</sup>, Kyung-Soo Hahm<sup>1, 2)</sup>  
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 3) Department of Biotechnology and BK21 Research Team for Protein Activity Control, Chosun University, Gwangju, Korea
- P1-013** **Design, Activity and Mechanism Study of Novel Truncated Antimicrobial Peptide**  
Hyung Jong Na<sup>3)</sup>, Yoonkyung Park<sup>1, 2)</sup>, Kyung-Soo Hahm<sup>1, 4)</sup>  
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- P1-014** **Antimicrobial Action and Cell Selectively of a Substituted Antimicrobial Peptide**  
Jong-Kook Lee<sup>1)</sup>, Kyung-soo Hahm<sup>1, 2)</sup>, Yoonkyung Park<sup>1, 3)</sup>  
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 3) Department of Biotechnology and BK21 Research Team for Protein Activity Control, Chosun University, Kwangju, Republic of Korea
- P1-015** **Biofilm forming inhibition of antimicrobial peptide on clinical isolates of *Pseudomonas aeruginosa***  
Jong-Kook Lee<sup>1)</sup>, Yoonkyung Park<sup>1, 3)</sup>, Kyung-Soo Hahm<sup>1, 2)</sup>  
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 3) Department of Biotechnology and BK21 Research Team for Protein Activity Control, Chosun University, Kwangju, Republic of Korea
- P1-016** **Antibacterial Activity of Synthetic D-amino acid Antimicrobial Peptide against Multiple Drug Resistant Clinical Isolates**  
Suyeon Yoo<sup>1)</sup>, Yoonkyung Park<sup>1, 3)</sup>, Kyung-Soo Hahm<sup>1, 2)</sup>  
 1) Research Center for Proteineous Materials(RCPM), Chosun University, South Korea,  
 2) Department of Cellular Molecular Medicine, School of Medicine, Chosun University, South Korea,  
 3) Biotechnology and BK21 Research Team for Protein Activity Control, Chosun University, South Korea
- P1-017** **Isolation of novel antifungal protein from pumpkin rinds**  
Suyeon Yoo<sup>1)</sup>, Kyung-soo Hahm<sup>1, 2)</sup>, Yoonkyung Park<sup>1, 3)</sup>  
 1) Research Center for Proteineous Materials(RCPM), Chosun University, Kwangju, Republic of Korea,  
 2) Department of Cellular/Molecular Medicine School of Medicine, Chosun University, Kwangju, Republic of Korea,  
 3) Department of Biotechnology and BK21 Research Team for Protein Activity Control, Chosun University, Kwangju, Republic of Korea
- P1-018** ***Drosophila* neuropeptide hug y present in the clock cells important for circadian rhythm oscillation**  
Keita Koga<sup>1)</sup>, Masayuki Nakamura<sup>1)</sup>, Miho Sumiyoshi<sup>2)</sup>, Akira Mastumoto<sup>3)</sup>, Miki Shimohigashi<sup>2)</sup>, Yasuyuki Shimohigashi<sup>1)</sup>  
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 2) Department of Biology, Faculty of Science, Fukuoka University, Fukuoka 814-0180, Japan,  
 3) Department of Anatomy, Juntendo University, Tokyo 113-0033, Japan
- P1-019** ***Apis pdf* gene expresses in circadian manner**  
Miho Sumiyoshi<sup>1)</sup>, Yukimasa Takeda<sup>2)</sup>, Seiji Sato<sup>2)</sup>, Keita Koga<sup>2)</sup>, Itoh Tsunao<sup>1)</sup>, Hiroyuki Nakagawa<sup>1)</sup>, Yasuyuki Shimohigashi<sup>2)</sup>, Miki Shimohigashi<sup>1)</sup>  
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 2) Laboratory of Structure-Function Biochemistry, Department of Chemistry, Kyushu University, Fukuoka 812-8581 Fukuoka, Japan

- P1-020 Purification of a peptide from rat brain**  
Kenji Mori, Mikiya Miyazato, Kenji Kangawa  
Department of Biochemistry, National Cerebral and Cardiovascular Center Research Institute, Osaka, Japan
- P1-021 ANALYSIS OF AMYLOID-LIKE FIBRIL FORMING PEPTIDE A119(LSNIDYLIKAS) AND B160(VILQQAADIAR) DERIVED FROM LAMININ-111 SEQUENCE**  
Kazuki Takeyama, Motoyoshi Nomizu  
School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Hachioji, Tokyo, Japan
- P1-022 Isolation and characterization of human IgA-specific binding peptides from random peptide library on T7 phage display system**  
Takaaki Hatanaka, Sayaka Kakoi, Ryohei Sugita, Shogo Tsukamoto, Kotaro Sakamoto, Kazunari Arima, Yuji Ito  
Department of Chemistry and Bioscience, Graduate School of Science and Engineering, Kagoshima University, Kagoshima, Japan
- P1-023 Identification of mouse IgG antibody-binding peptide by screening from T7 phage random peptide library**  
Sayaka Kakoi, Takaaki Hatanaka, Ryohei Sugita, Shogo Tsukamoto, Kotaro Sakamoto, Kazunari Arima, Yuji Ito  
Department of Chemistry and Bioscience, Graduate School of Science and Engineering, Kagoshima University, Kagoshima, Japan
- P1-024 Only frog ghrelin of the genus *Rana* has threonine residue at the N-terminal position 3**  
Hiroyuki Kaiya<sup>1</sup>, Itaru Hasunuma<sup>2</sup>, Kazuyoshi Tsutsui<sup>2</sup>, Kenji Kangawa<sup>1</sup>, Mikiya Miyazato<sup>1</sup>  
1) Department of Biochemistry, National Cerebral and Cardiovascular Center Research Institute, Osaka 565-8565, Japan,  
2) Laboratory of Integrative Brain Science, Department of Biology, Waseda University, Tokyo 162-8480, Japan
- P1-025 New Insights on Dengue Virus Infection and Assembly. The Role of the Capsid Protein**  
Joao M. Freire<sup>1</sup>, Ana S. Veiga<sup>1</sup>, Nuno C. Santos<sup>1</sup>, Wioleta Kowalczyk<sup>2</sup>, David Andreu<sup>2</sup>, Miguel A. R. B. Castanho<sup>1</sup>  
1) Instituto de Medicina Molecular, Faculty of Medicine, University of Lisbon,  
2) Department of Experimental and Health Sciences, Pompeu Fabra University, Barcelona Biomedical Research Park, Spain
- P1-026 Molecular design of a helix-loop-helix peptide binding murine double minute 2(MDM2)**  
Masahiro Oguri, Zengmao Ye, Ikuo Fujii  
Department of Biological Science, Graduate School of Science, Osaka Prefecture University, Osaka, Japan
- P1-027 Discovery and characterisation of peptide antimicrobials directed towards rumen methanogens: A potential greenhouse gas mitigation strategy**  
Belinda M. Hartmann, Christopher S. McSweeney  
Division of Livestock Industries, Commonwealth Scientific and Industrial Research Organisation(CSIRO), Queensland, Australia
- P1-028 New brain-targeted analgesic Kyotorphin derivatives: linking peptide-membrane interaction with *in vivo* efficacy**  
Marta M. B. Ribeiro<sup>1</sup>, Montserrat Heras<sup>2</sup>, Eduard Bardaji<sup>2</sup>, Antónia Pinto<sup>3</sup>, Marta Pinto<sup>3</sup>, Isaura Tavares<sup>3</sup>, Miguel A. R. B. Castanho<sup>1</sup>  
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2) LIPPSO, University of Girona, Girona, Spain,  
3) Instituto de Histologia e Embriologia, Faculty of Medicine, University of Oporto, Porto, Portugal
- P1-029 Prevention of hydrogen peroxide-induced oxidative stress in HDF cells by peptides derived from seapipet**  
BoMi Ryu<sup>1</sup>, Himaya S. W. A<sup>1</sup>, Zhong-Ji Qian<sup>2</sup>, Sang-Hoon Lee<sup>1</sup>, Se-Kwon Kim<sup>1, 2</sup>  
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- P1-030 Neuropeptide Y induces anxiolytic-like action in a goldfish model**  
Kouhei Matsuda, Atsushi Sakashita, Ki Sung Kang  
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- P1-031** Protein fractions with angiotensin I-converting enzyme(ACE) inhibitory effect derived from *Ganoderma lucidum* mycelia  
Nurhuda Mohamad Anzor<sup>1, 2)</sup>, Norhaniza Aminudin<sup>1)</sup>, Noorlidah Abdullah<sup>1)</sup>  
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- P1-032** BIOPROTECTIVE EFFECTS OF HAIR, FUR, AND WOOL  
Andrzej W. Lipkowski<sup>1)</sup>, Sergiusz Markowicz<sup>3)</sup>, Masaaki Yoshikawa<sup>4)</sup>, Katarzyna Kurzepa<sup>2)</sup>, Aleksandra Szczucinska<sup>2)</sup>, Bozena Szaniawska<sup>1)</sup>  
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2) Industrial Chemistry Research Institute, Warsaw, Poland,  
3) Maria Sklodowska-Curie Oncological Research Centre, Warsaw, Poland,  
4) School of Engineering, Osaka University, Suita, Japan
- P1-033** Proteins from *Pleurotus sajor-caju* mycelia having an Angiotensin I-converting enzyme(ACE) inhibitory activity  
Badjie Xietaqieullah Ibadallah, Noorlidah Abdullah, Adawiyah Suriza Shuib  
Institute of Biological Science, Faculty of Science, University of Malaya, Kuala Lumpur, Malaysia
- P1-034** Decreased expression of adrenomedullin 2/intermedin in the kidney of hypertension or renal failure; Possible involvement in chronic kidney disease  
Kazuhiro Takahashi<sup>1)</sup>, Takuo Hirose<sup>2)</sup>, Nobuyoshi Mori<sup>3)</sup>, Takefumi Mori<sup>4)</sup>, Masahiro Kohzuki<sup>3)</sup>, Yutaka Imai<sup>2)</sup>, Kazuhito Totsune<sup>2, 5)</sup>  
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5) Department of Social Welfare, Faculty of Synthetic Welfare, Tohoku Fukushi University, Sendai, Japan
- P1-035** Protein with Anti-diabetic activity from *Pleurotus sajor-caju*(Grey Oyster Mushroom)  
Nurul Azwa Abd. Wahab, Noorlidah Abdullah, Norhaniza Aminudin  
1) Institute of Biological Sciences, Faculty of Science, University of Malaya,
- P1-036** A novel hypothalamic peptide, neuroendocrine regulatory peptide-2, regulates feeding behavior via the orexin system in the hypothalamus  
Koji Toshinai<sup>1)</sup>, Hideki Yamaguchi<sup>1)</sup>, Haruaki Kageyama<sup>2)</sup>, Takashi Matsuo<sup>1)</sup>, Keiichi Koshinaka<sup>3)</sup>, Kazuki Sasaki<sup>4)</sup>, Seiji Shioda<sup>2)</sup>, Naoto Minamino<sup>4)</sup>, Masamitsu Nakazato<sup>1)</sup>  
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4) Department of Pharmacology, National Cardiovascular Center Research Institute, Suita, Japan
- P1-037** Anti-Cervical Cancer Activity and SELDI-TOF-MS Analysis of Proteins from *Lignosus rhinocerus*(Tiger's milk mushroom) Grown in Stirred Tank Reactor  
Noorlidah Abdullah, Ahmad Irfan Abdul Wahab, Lau Beng Fye, Nurhayati Zainal Abidin, Norhaniza Aminudin  
Mushroom Research Centre, Institute of Biological Sciences, Faculty of Science, University of Malaya, Kuala Lumpur, Malaysia
- P1-038** Implication of pituitary adenylate cyclase-activating polypeptide(PACAP) in diabetic neuropathy of streptozotocin(STZ) treated mice  
Atsuro Miyata, Keigo Ikeda, Kazuhiko Inoue, Takashi Kurihara, Takao Shimizu  
Department of Pharmacology, Graduate School of Medical and Dental Sciences, Kagoshima University, Kagoshima, Japan
- P1-039** Genome-wide screening of *Escherichia coli* genes involved in execution and promotion of peptide-pheromone-regulated natural transformation.  
Naomi Kurono, Ayako Matsuda, Rina Etchuyaya, Rina Sobue, Yumi Sasaki, Miki Ito, Tsuyako Ando, Sumio Maeda  
1) Graduate School of Humanities and Sciences, Nara women's University, Nara, Japan,  
2) Faculty of Human Life and Environment, Nara Women's University

- P1-040** Endogenously generated 2-arachidonoylglycerol plays an inhibitory role in the bombesin-induced activation of central adrenomedullary outflow in rats  
Takahiro Shimizu, Lianyi Lu, Kunihiko Yokotani  
Department of Pharmacology, School of Medicine, Kochi University, Kochi, Japan
- P1-041** Genome-wide screening of *Escherichia coli* genes involved in repression of peptide-pheromone-regulated natural transformation.  
Ayako Matsuda<sup>1)</sup>, Naomi Kurono<sup>1)</sup>, Chinatsu Kawano<sup>2)</sup>, Kozue Shirota<sup>2)</sup>, Akiko Hirabayashi<sup>2)</sup>, Mutsumi Horino<sup>2)</sup>, Rika Etchuuya<sup>1)</sup>, Rina Sobue<sup>1)</sup>, Yumi Sasaki<sup>2)</sup>, Tsuyako Ando<sup>1)</sup>, Mirai Ito<sup>1)</sup>, Sumio Maeda<sup>1,2)</sup>  
1) Graduate School of Humanities and Sciences, Nara Women's University,  
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- P1-042** Incretin-like activity of galanin C-terminal analogue  
Hiroyuki Yamamoto, Yasunori Mori, Kazuaki Iguchi, Minoru Hoshino  
Department of Bioorganic Chemistry, Graduate School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, Japan
- P1-043** A possible correlation between the oxytocin-induced and angiotensin IV-induced anti-hyperalgesia at the spinal level in rats  
Eagle Yi-Kung Huang<sup>1)</sup>, En-Pei Chang<sup>2)</sup>, Pao-Luh Tao<sup>1)</sup>  
1) Department of Pharmacology, National Defense Medical Center, Taipei, Taiwan,  
2) Institute of Neuroscience, National Chengchi University, Taipei, Taiwan
- P1-044** Retinal Protective Effect of Pituitary Adenylate PACAP against NMDA-induced Damage in Mice  
Tomoya Nakamachi<sup>1, 2)</sup>, Kimi Endo<sup>1, 3)</sup>, Tamotsu Seki<sup>1, 3)</sup>, Nobuyuki Kagami<sup>1)</sup>, Keisuke Nakamura<sup>1)</sup>, Yoshihiro Wada<sup>1, 3)</sup>, Kouji Kishimoto<sup>4)</sup>, Jozsef Farkas<sup>1)</sup>, Satoru Arata<sup>2)</sup>, Seiji Shioda<sup>1)</sup>  
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4) Department of Pathology, Showa University Fujigaoka Hospital, Yokohama
- P1-045** Investigation of plant defense responses induced by the novel elicitor peptide, PIP-1.  
Eriko Komoda, Yuji Ono, Masahiro Miyashita, Hisashi Miyagawa  
Division of Applied Life Sciences, Graduate School of Agriculture, Kyoto University, Kyoto, Japan
- P1-046** Effects of pituitary adenylate cyclase activating polypeptide(PACAP) in corneal epithelial regeneration and signal transduction in rats  
Jozsef Farkas<sup>1, 6)</sup>, Laszlo Mester<sup>2)</sup>, Krisztina Kovacs<sup>2)</sup>, Dora Reglodi<sup>1)</sup>, Attila Matkovits<sup>1)</sup>, Valeria Gaal<sup>5)</sup>, Zsolt Biro<sup>5)</sup>, Aliz Szabo<sup>2)</sup>, Boglarka Racz<sup>2)</sup>, Krisztina Szabadfi<sup>4)</sup>, Andrea Lubics<sup>1)</sup>, Andrea Tamas<sup>1)</sup>, Tamas Atlasz<sup>3)</sup>, Seiji Shioda<sup>6)</sup>, Tomoya Nakamachi<sup>6)</sup>, Peter Kiss<sup>1)</sup>  
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- P1-047** Usefulness of plasma kisspeptin levels as a biomarker in the diagnosis of perinatal complication  
Fumihiko Katagiri<sup>1)</sup>, Jun Yoshimatsu<sup>2)</sup>, Yuichi Furukawa<sup>2)</sup>, Hisashi Narahara<sup>2)</sup>, Motoyoshi Nomizu<sup>1)</sup>  
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2) Department of Obstetrics and Gynecology, Faculty of Medicine, Oita University, Yufu, Oita, Japan
- P1-048** Soymorphin-5, a soy-derived opioid peptide, improves glucose and lipid metabolism in diabetic KK-Ay mice  
Mariko Oie<sup>1)</sup>, Aya Muraki<sup>1)</sup>, Yuko Yamada<sup>1)</sup>, Masaaki Yoshikawa<sup>2)</sup>, Tsuyoshi Goto<sup>1)</sup>, Nobuyuki Takahashi<sup>1)</sup>, Teruo Kawada<sup>1)</sup>, Kousaku Ohinata<sup>1)</sup>  
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- P1-049** **Histidine-Related Dipeptides, Carnosine, Anserine and Homocarnosine, Possess the CNS Depressant Effects on Mice and their Action Mechanism**  
Noriyuki Usami<sup>1, 2, 3)</sup>, Nobuyuki Kishi<sup>3, 4)</sup>, Katsuhiko Ikebe<sup>2)</sup>, Yu-ki Kubota<sup>2)</sup>, Tomonori Fukushima<sup>2)</sup>, Toshiyuki Kimura<sup>5)</sup>, Ikuo Yamamoto<sup>2, 3)</sup>  
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4) Tomitaka Pharmacy, Hyuga, Miyazaki, Japan, 5) Faculty of Pharmaceutical Sciences, Hokuriku University, Kanazawa, Japan
- P1-050** **Vasorelaxing and hypotensive effects of dipeptides Arg-(aromatic amino acid)**  
Tomomi Kagebayashi, Yuko Yamada, Kousaku Ohinata  
Division of Food Science and Biotechnology, graduate School of Agriculture, Kyoto University, Uji, Kyoto 611-0011, Japan
- P1-051** **Effect of functional peptide on the growth and proliferation of artificial skin equivalent**  
Seul-Ki Park<sup>1)</sup>, Yu-Mi Jeon<sup>2)</sup>, Mi-Young Lee<sup>3)</sup>  
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3) Department of Medical Biotechnology, SoonChunHyang University, Asan, Chungnam, Korea
- P1-052** **Orexin depolarizes rat laterodorsal tegmental neurons via orexin-2 receptors: an in vitro study**  
Yuki Ikari<sup>1)</sup>, Yutaka Oomura<sup>2)</sup>, Kazuo Sasaki<sup>1)</sup>  
1) Division of Bio-Information Engineering, Faculty of Engineering, University of Toyama, Toyama, Japan,  
2) Department of Integrative Physiology, Graduate school of Medical Science, Kyushu University, Fukuoka, Japan
- P1-053** **Administration of hepcidin in 48-hour intervals does not prevent hepatic iron overload in mice.**  
Tereza Sillerova<sup>1)</sup>, Daniel Vyoral<sup>1, 2)</sup>, Jan Zivny<sup>2)</sup>, Ludek Sefc<sup>2)</sup>, Jiri Petrak<sup>1, 2)</sup>  
1) Institute of Hematology and Blood Transfusion, Prague, Czech Republic,  
2) Institute of Pathological Physiology, First Faculty of Medicine, Charles University in Prague, Czech Republic
- P1-054** **Establishment of a ghrelin-producing cell line from a gastric tumor in ghrelin-promoter SV40 T-antigen transgenic mice.**  
Hiroshi Iwakura<sup>1)</sup>, Yushu Li<sup>1)</sup>, Hiroyuki Ariyasu<sup>1)</sup>, Hiroshi Hosoda<sup>3)</sup>, Naotetsu Kanamoto<sup>2)</sup>, Mika Bando<sup>1)</sup>, Go Yamada<sup>2)</sup>, Kiminori Hosoda<sup>2)</sup>, Kazuwa Nakao<sup>2)</sup>, Kenji Kangawa<sup>3)</sup>, Takashi Akamizu<sup>1)</sup>  
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2) Department of Medicine and Clinical Science, Endocrinology, and Metabolism, Kyoto University Graduate School of Medicine, Kyoto, Japan,  
3) National Cardiovascular Center Research Institute, Osaka, Japan
- P1-055** **The effects of growth inhibitory peptide on follicular thyroid cancer cell growth, migration, and invasion**  
Ying-Ray Lee<sup>1)</sup>, Shih-Che Hua<sup>2)</sup>, Chieh-Hsiang Lu<sup>2)</sup>, Hui-I Yu<sup>2)</sup>, Tien-Chun Chang<sup>3)</sup>  
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3) Division of Endocrinology and Metabolism, Department of Internal Medicine, College of Medicine, National Taiwan University, Taipei, Taiwan
- P1-056** **The effects of prolactin-releasing peptide(PrRP) in energy metabolism and stress**  
Akikazu Mochiduki<sup>1, 2)</sup>, Kinji Inoue<sup>2)</sup>, Naoto Minamino<sup>1)</sup>  
1) Department of Molecular Pharmacology, National Cerebral and Cardiovascular Center, Osaka, Japan,  
2) Graduate School of Science and Engineering, Saitama University, Saitama, Japan
- P1-057** **Dephosphorylation of Nucleolar Protein Nucleophosmin by Protein Phosphatase PPM1D**  
Yuuki Kozakai, Hiroaki Yagi, Yoshiro Chuman, Toshiaki Imagawa, Kazuyasu Sakaguchi  
Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Japan
- P1-058** **Inhibition by galanin of monosynaptic primary-afferent A  $\delta$ -fiber and C-fiber excitatory transmission in adult rat spinal dorsal horn neurons**  
Hai-Yuan Yue, Tsugumi Fujita, Lian-Hua Piao, Chang-Yu Jiang, Masanari Inoue, Kotaro Mizuta, Toshiharu Yasaka, Liu Yang, Hiroki Kawasaki, Eiichi Kumamoto  
Department of Physiology, Faculty of Medicine, Saga University, Saga, Japan

- P1-059**    **The discovery of cyclic peptides inhibitor against Akt2 protein**  
Yuuki Hayashi<sup>1)</sup>, Yuhichiro Aoki<sup>2)</sup>, Hiroaki Suga<sup>1, 2, 3)</sup>  
1) Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan,  
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3) Department of Chemistry, The University of Tokyo, Tokyo, Japan
- P1-060**    **New Kyotorphin derivatives: comparative study of side-effects with opioids used in clinical practice**  
Sonia A. Sa Santos, Marta M. B. Ribeiro, David S. C. Sousa, Miguel A. R. B. Castanho  
Physical Biochemistry Unit, Instituto de Medicina Molecular(IMM), Faculdade de Medicina - Universidade de Lisboa, Lisboa, Portugal
- P1-061**    **Repression of p53 transcriptional activity by p53 tetramerization domain peptide containing PTD and NLS domain**  
Junya Wada, Rui Kamada, Yoshiro Chuman, Toshiaki Imagawa, Kazuyasu Sakaguchi  
Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Japan
- P1-062**    **Multiple ligands for calcitonin receptor in mammals: calcitonin and calcitonin receptor-stimulating peptide**  
Tsukasa Osaki, Takeshi Katafuchi, Naoto Minamino  
Department of Molecular Pharmacology, National Cerebral and Cardiovascular Center Research Institute, Suita, Osaka, Japan
- P1-063**    **Expression of oxytocin receptor in the rat heart; effects of two types of stressor with prevalence of psychogenic and/or physical components of action**  
Sixtus Hynie<sup>1)</sup>, Magda Chottova-Dvorakova<sup>1, 2)</sup>, Pavel Sida<sup>1)</sup>, Eliska Mistrova<sup>1, 2)</sup>, Vera Klenerova<sup>1)</sup>  
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2) Department of Physiology, Medical Faculty, Charles University in Prague, Plzen, Czech Republic
- P1-064**    **Targeting angiogenesis: VEGF receptor peptide binders**  
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- P1-065**    **"Self-Activating" & Induced-Fit" Approach to Peptidyl Mimic of Grb2-SH2 Domain**  
Katsunori Tanaka<sup>1)</sup>, Takayuki Iwata<sup>1)</sup>, Sanae Shirotaki<sup>1)</sup>, Chika Kageyama<sup>1)</sup>, Tsuyoshi Tahara<sup>2)</sup>, Satoshi Nozaki<sup>2)</sup>, Eric R. O. Siwu<sup>1)</sup>, Satoru Tamura<sup>3)</sup>, Shunsuke Douke<sup>3)</sup>, Nobutoshi Murakami<sup>3)</sup>, Hirotaka Onoe<sup>2)</sup>, Yasuyoshi Watanabe<sup>2)</sup>, Koichi Fukase<sup>1)</sup>  
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- P1-066**    **Cyclic PDZ-binding Peptides as Neuroprotective agents against Excitotoxic Brain damage**  
Brian M Auster<sup>1)</sup>, Kate Duberley<sup>1)</sup>, Paul Turner<sup>2)</sup>, Ruth Empson<sup>2)</sup>  
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- P1-067**    **Anti-inflammatory effect of allosteric peptide agonists of calcium sensing receptor in human intestinal cells**  
Yoshinori Mine, Hua Zhang  
Department of Food Science, University of Guelph
- P1-068**    **Agonist Peptides for FPR2 Show Anxiolytic-like Activity**  
Hui Zhao, Soushi Sonoda, Masaaki Yoshikawa  
Research Institute for Production Development
- P1-069**    **Intact cell-based SPR analyses of interactions between EGF and its receptor**  
Takaaki Mizuguchi<sup>1)</sup>, Hiromasa Uchimura<sup>2)</sup>, Yoshiaki Kiso<sup>1)</sup>, Kazuki Saito<sup>2, 3)</sup>  
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- P1-070** Partial Peptide Sequences from *Plasmodium falciparum* Enolase as Synthetic Artificial Antigens  
Toru Horie<sup>1)</sup>, Shota Sato<sup>1)</sup>, Tetsuro Demura<sup>1)</sup>, Ayano Iwasaki<sup>1)</sup>, Masashi Urano<sup>1)</sup>, Keiichi Yamada<sup>1)</sup>, Hiroyuki Oku<sup>1)</sup>, Ichiro Matsuo<sup>1)</sup>, Shin Hasegawa<sup>2)</sup>, Yasunari Maekawa<sup>2)</sup>, Kazuhiko Yano<sup>3)</sup>, Shigeyuki Kano<sup>3)</sup>  
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3) Research Institute, National Center for Global Health and Medicine 1-21-1 Toyama, Shinjuku-ku, Tokyo 162-8655, Japan
- P1-071** Innate Immunostimulatory Lipopeptides of *Staphylococcus aureus* as TLR2 Ligands; Prediction with mRNA Expression, Synthesis, and NK cell Activation  
Yukari Fujimoto<sup>1)</sup>, Masahito Hashimoto<sup>2)</sup>, Mami Katsumoto<sup>1)</sup>, Masahiro Azuma<sup>3)</sup>, Misako Matsumoto<sup>3)</sup>, Tsukasa Seya<sup>3)</sup>, Koichi Fukase<sup>1)</sup>  
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- P1-072** Novel polyepitope malaria vaccine candidate  
S Olugbile S<sup>1)</sup>, A Jafarshad<sup>2)</sup>, V Villard<sup>3)</sup>, C Kulangara<sup>4)</sup>, C Habel<sup>3)</sup>, C Roussilhon<sup>2)</sup>, G Frank<sup>2)</sup>, GW Agak<sup>2)</sup>, I Felger<sup>4)</sup>, I Nebie<sup>5)</sup>, C Servis<sup>3)</sup>, AV Kajava<sup>6)</sup>, F Spertini<sup>1)</sup>, P Druilhe<sup>2)</sup>, G Corradin<sup>3)</sup>  
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6) CRBM, CNRS, University of Montpellier, Montpellier, France
- P1-074** Immunological basis of M13 phage vaccines: an effective vaccine design tested in a mouse model of Alzheimer's disease.  
Shuhei Hashiguchi, Yuya Yamaguchi, Haruna Tahara, Takashi Yamada, Satomi Kai, Risa Abe, Koichi Tanaka, Kazuhisa Sugimura  
Department of Chemistry and Biotechnology, Graduate school of Science and Engineering, Kagoshima University, Kagoshima, Japan
- P1-075** Binding epitopes of human IgG antibody specifically binding to the beta-form but not alpha-form of human prion protein.  
Toshiya Kubota<sup>1)</sup>, Yuta Hamazoe<sup>1)</sup>, Ryota Komure<sup>1)</sup>, Toshihiro Nakashima<sup>2)</sup>, Shuhei Hashiguchi<sup>1)</sup>, Kazuhisa Sugimura<sup>1)</sup>  
1) Department of Chemistry and Biotechnology, Faculty of Engineering, Kagoshima University,  
2) The Chemo-Sero-Therapeutic Research Institute.
- P1-076** Nano-Encapsulation and Immunological Properties for a Peptide Antigen from *Plasmodium falciparum* Enolase Toward an All-Synthetic Malaria Vaccine  
Hiroyuki Oku<sup>1)</sup>, Kazuhiko Yano<sup>2)</sup>, Megumi Fukumoto<sup>1, 2)</sup>, Shigeyuki Kano<sup>2)</sup>  
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- P1-077** Adjuvant engineering for cancer immunotherapy: development of a synthetic TLR2 ligand with alternative functions.  
Takashi Akazawa, Norimitsu Inoue  
Department of Molecular Genetics, Institute, Osaka Medical Center for Cancer, Osaka, Japan
- P1-078** Synthesis and evaluation of CXCR4-derived peptides targeting the development of AIDS vaccines  
Chie Hashimoto<sup>1)</sup>, Tetsuo Narumi<sup>1)</sup>, Wataru Nomura<sup>1)</sup>, Naoki Yamamoto<sup>2)</sup>, Hirokazu Tamamura<sup>1)</sup>  
1) Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University,  
2) Yong Loo Lin School of Medicine, National University of Singapore
- P1-079** Preparation of M13 phage displaying g8p coat proteins fused with a conformational mimotope-peptide of Amyloid-beta 42 fibril  
Satomi Kai, Takashi Yamada, Yuya Yamaguchi, Shuhei Hashiguchi, Koichi Tanaka, Kazuhisa Sugimura  
Department of Chemistry and Biotechnology, Faculty of Engineering, Kagoshima University, Kagoshima, Japan

- P1-080** Proteolytic processing of neurosecretory protein VGF in the rat  
Emi Mishiro-Sato<sup>1)</sup>, Kazuki Sasaki<sup>1)</sup>, Masako Matsubara<sup>1)</sup>, Takehiro Ishizu<sup>2)</sup>,  
Kumiko Yoshizawa-Kumagaya<sup>2)</sup>, Yoshinori Satomi<sup>3)</sup>, Toshifumi Takao<sup>3)</sup>, Naoto Minamino<sup>1)</sup>  
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- P1-081** Effect of cevimeline on salivary neuropeptide levels in healthy volunteers  
Yosuke Suzuki, Hiroki Itoh, Fumihiro Nishimura, Tomohide Abe, Yuhki Sato, Masaharu Takeyama  
Department of Clinical Pharmacy, Oita University Hospital, Oita, Japan
- P1-082** Global identification of peptide processing sites implicated in the regulated secretory pathway  
Masaki Wakabayashi<sup>1)</sup>, Kazuki Sasaki<sup>1)</sup>, Tsukasa Osaki<sup>1)</sup>, Yoshinori Satomi<sup>2)</sup>, Toshifumi Takao<sup>2)</sup>,  
Naoto Minamino<sup>1)</sup>  
1) Department of Molecular Pharmacology, National Cerebral and Cardiovascular Center Research Institute, Osaka, Japan,  
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- P1-083** Polyphenols in Ginkgo biloba Inhibit Aggregation of Amyloid-beta Peptide and Disaggregate Preformed Fibrils  
Hai-Yan Xie, Jing-Rong Wang, Alan Ho, Lin Zhu, Zhi-Hong Jiang  
School of Chinese Medicine, Hong Kong Baptist University, Hong Kong, China
- P1-084** An Approach to Identifying Endogenous Functional Peptides in a Set of Sequence Information Provided by Mass Spectrometry  
Kazuki Sasaki<sup>1)</sup>, Noriyuki Takahashi<sup>2)</sup>, Mitsuo Satoh<sup>2)</sup>, Motoo Yamasaki<sup>2)</sup>, Naoto Minamino<sup>1)</sup>  
1) Department of Molecular Pharmacology, National Cerebral and Cardiovascular Center, Osaka, Japan,  
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- P1-085** Towards elucidating the role of ubiquitination in the pathogenesis of Parkinsons disease using semisynthetic ubiquitinated alpha synuclein  
Mirva Hejjaoui<sup>1)</sup>, Mahmood Haj-Yahya<sup>2)</sup>, K. S. Ajish Kumar<sup>2)</sup>, Ashraf Brik<sup>2)</sup>, Hilal Lashuel<sup>1)</sup>  
1) Brain Mind Institute, Swiss Federal Institute of Technology Lausanne-EPFL- Lausanne, Switzerland,  
2) Department of Chemistry, Ben-Gurion University of the Negev, Beer Sheva, Israel
- P1-086** Prediction of hydrophobicity change induced by racemization of aspartyl residues in  $\beta$ -amyloids  
Toratane Munegumi  
Department of Materials Chemistry and Bioengineering, Oyama National College of Technology, Oyama, Japan
- P1-087** ATP binding domain of NukT, a class-II lantibiotic transporter, is important for its peptidase activity  
Mami Nishie<sup>1)</sup>, Makoto Sasaki<sup>1)</sup>, Jun-ichi Nagao<sup>2)</sup>, Takeshi Zendo<sup>1)</sup>, Jiro Nakayama<sup>1)</sup>, Kenji Sonomoto<sup>1)</sup>  
1) Department of Bioscience and Biotechnology, Faculty of Agriculture, Graduate School, Kyushu University, Fukuoka, Japan,  
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- P1-088** Conversion of Arginine to Ornithine for Improving the Fragmentation Pattern of Peptides Labeled with the N-terminal tris(2, 4, 6-trimethoxyphenyl) phosphonium Group in Tandem Mass Spectrometry  
Hiroki Kuyama<sup>1)</sup>, Chihiro Nakajima<sup>2)</sup>, Takashi Nakazawa<sup>3)</sup>, Osamu Nishimura<sup>1)</sup>  
1) Institute for Protein Research, Osaka University, Osaka, Japan,  
2) Life Science Research Center, Shimadzu Corporation, Kyoto, Japan,  
3) Department of Chemistry, Nara Womens University, Nara, Japan
- P1-089** A method for N-terminal de novo sequencing of Na-blocked proteins by mass spectrometry  
Chihiro Nakajima<sup>1, 2)</sup>, Hiroki Kuyama<sup>1)</sup>, Takashi Nakazawa<sup>3)</sup>, Osamu Nishimura<sup>1)</sup>, Susumu Tsunasawa<sup>1)</sup>  
1) Institute for Protein Research, Osaka University, Osaka, Japan,  
2) Life Science Research Center, Shimadzu Corporation, Kyoto, Japan,  
3) Department of Chemistry, Nara Womens University, Nara, Japan
- P1-090** Introduction of positron emission tomography(PET) probes at the N-terminus of peptide/protein by the NEXT-A reaction  
Masumi Taki, Hiroyuki Kuroiwa, Masahiko Sisido  
Division of Chemistry and Biochemistry, The Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan

- P1-091**    **Carcinoma Cell Imaging by Using EpCAM-binding Peptides Selected from the Cyclic Non-standard Peptide Library**  
Kazuhiro Iwasaki<sup>1)</sup>, Kenji Kashiwagi<sup>2)</sup>, Takayuki Katoh<sup>3)</sup>, Hiroaki Suga<sup>3, 4)</sup>  
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- P1-092**    **Polylysine-based *N*-glycan dendrimers as noninvasive imaging tracers**  
Katsunori Tanaka, Eric R. O. Siwu, Tohru Watanabe, Koichi Fukase  
Department of Chemistry, Graduate School of Science, Osaka University, Osaka, Japan
- P1-093**    **Development of modified cyclic peptides for Imaging of CXCR4 receptors**  
Oliver Demmer<sup>1)</sup>, Ingrid Dijkgraaf<sup>2)</sup>, Eleni Gourni<sup>2)</sup>, Hans-Juergen Wester<sup>2)</sup>, Horst Kessler<sup>1)</sup>  
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- P1-095**    **Peptide probe for in vivo imaging of apoptosis and drug delivery**  
Napoleon Bonaparte, So-Yeon Lee, Bodhraj Acharya, Guruprasath Padmanaban, Kai Wang, In-San Kim,  
Byung-Heon Lee  
Department of Biochemistry and Cell Biology, School of Medicine, Kyungpook National University, Daegu, Korea
- P1-096**    **N-terminus-specific<sup>64</sup>Cu-labeling utilizing the Cu binding motif(ATCUN)**  
Koki Hasegawa, Mie Nishimura, Emi Hayashinaka, Yasuhiro Wada, Yosky Kataoka, Yasuyoshi Watanabe  
Riken Center for Molecular Imaging Science, Hyogo, Japan
- P1-097**    **Syntheses of novel cyclic undecapeptides related to gramicidin S with D-Phe-X-Pro sequences**  
Makoto Tamaki<sup>1)</sup>, Yukie Imazeki<sup>1)</sup>, Fumito Hirose<sup>1)</sup>, Kazumasa Tkanasi<sup>1)</sup>, Takuji Harada<sup>1)</sup>, Gaku Yamamoto<sup>1)</sup>, Ayaka Watanabe<sup>1)</sup>, Akemi Saito<sup>1)</sup>, Mitsuno Shindo<sup>2)</sup>, Masahiro Kimura<sup>2)</sup>, Yoshiki Uchida<sup>2)</sup>  
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- P1-098**    **Novel orally active peptides with anxiolytic-like activity**  
Kousaku Ohinata, Norimasa Kanegawa, Ayako Oda  
Division of Food Science and Biotechnology, Graduate School of Agriculture, Kyoto University, Gokasho, Uji, Kyoto, Japan
- P1-099**    **Antimicrobially active analogues of gramicidin S having fatty acyl moiety**  
Yukie Imazeki<sup>1)</sup>, Akiko Takashima<sup>1)</sup>, Kenta Fujinuma<sup>1)</sup>, Mitsuno Shindo<sup>2)</sup>, Masahiro Kimura<sup>2)</sup>, Yoshiki Uchida<sup>2)</sup>, Makoto Tamaki<sup>1)</sup>  
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- P1-100**    **Synthesis of Alkene-type Dipeptide Isosteres and Its Application to Structure-activity Relationship Study on a CXCR4 Antagonist FC131**  
Kazuya Kobayashi<sup>1)</sup>, Ryoko Hayashi<sup>1)</sup>, Shinya Oishi<sup>1)</sup>, Noriko Tanahara<sup>1)</sup>, Hiroaki Ohno<sup>1)</sup>, Takeshi Naito<sup>2)</sup>, Eiichi Kodama<sup>2)</sup>, Masao Matsuoka<sup>2)</sup>, Nobutaka Fujii<sup>1)</sup>  
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- P1-101**    **Evaluation of substrate specificities for BACE 1 using synthetic peptide libraries**  
Taeko Kakizawa<sup>1)</sup>, Yasunao Hattori<sup>1)</sup>, Kenta Teruya<sup>1)</sup>, Akira Sanjoh<sup>2)</sup>, Kenichi Akaji<sup>1)</sup>  
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- P1-102**    **Modular toxins from spider venom - peptides with unique structure**  
Alexander A. Vassilevski, Eugene V. Grishin  
Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow, Russia

- P1-103** Using Stable Disulfide-Rich Cyclic Framework for the Engineering of Active Pro-angiogenesis Peptides Targeting Therapeutic Angiogenesis Drug Delivery  
Lai Y. Chan<sup>1)</sup>, Sunithi Gunasekera<sup>1)</sup>, Nathalie F. Worth<sup>2)</sup>, Sarah-Jane Le<sup>2)</sup>, Richard J. Clark<sup>1)</sup>, Julie H. Campbell<sup>2)</sup>, David J. Craik<sup>1)</sup>, Norelle L. Daly<sup>1)</sup>  
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2) Australian Institute for Bioengineering and Nanotechnology, The University of Queensland, Brisbane, Australia
- P1-104** Structure-activity relationship study of the insecticidal peptide, LaIT1, isolated from the venom of the scorpion *Liocheles australasiae*  
Tomoyuki Kawachi, Reed Ayabe, Nobuto Matsushita, Masahiro Miyashita, Yoshiaki Nakagawa, Hisashi Miyagawa  
Division of Applied Life Sciences, Graduate School of Agriculture, Kyoto University, Kyoto, Japan
- P1-105** The elucidation of the conformational requirements for methionine side-chain interaction with FPR by using fluorinated fMLP analogs  
Ryo Takabatake, Ryo Yamaguchi, Satoshi Osada, Hiroaki Kodama  
Department of Chemistry, Graduate School of Science and Engineering, Saga University, Saga, Japan
- P1-106** Stabilizing mechanism of the transition-state hapten of catalytic antibody by molecular dynamics simulation  
Mitsumasa Haruna<sup>1)</sup>, Junko Ueda<sup>2)</sup>, Kohji Kuromiya<sup>1)</sup>  
1) Department of Bioorganic Chemistry, Faculty of Pharmacy, Meijo University, Nagoya, Japan,  
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- P1-107** Structure-Activity Relationships of Chlorotoxin for Tumor Imaging  
Muharrem Akcan<sup>1)</sup>, Mark R. Stroud<sup>2)</sup>, Stacey J. Hansen<sup>2)</sup>, Richard J. Clark<sup>1)</sup>, Norelle L. Daly<sup>1)</sup>, David J. Craik<sup>1)</sup>, James M. Olson<sup>2, 3)</sup>  
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3) Department of Pediatrics, University of Washington and Seattle Childrens Hospital, Seattle, WA 98105, USA
- P1-108** Structure-activity relationship studies of the pheromone biosynthesis-activating neuropeptide(PBAN) from the silkworm *Bombyx mori*  
Takeshi Kawai<sup>1)</sup>, Koji Nagata<sup>1)</sup>, Akitoshi Okada<sup>1)</sup>, Koh Hayakawa<sup>1)</sup>, J. Joe Hull<sup>2)</sup>, Jae Min Lee<sup>2)</sup>, Shogo Matsumoto<sup>2)</sup>, Masaru Tanokura<sup>1)</sup>, Hiromichi Nagasawa<sup>1)</sup>  
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- P1-109** Cyclic Tetrapeptides containing iso-Propylglycine as Histone Deacetylase Inhibitors  
Satoko Matsuo<sup>1)</sup>, Tamaki Kato<sup>1)</sup>, Norikazu Nishino<sup>1)</sup>, Nobuyuki Kobashi<sup>2)</sup>, Akihiro Ito<sup>2)</sup>, Minoru Yoshida<sup>2)</sup>  
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- P1-110** Improving Protein-Protein Interaction Sites Prediction by Using Structure-Based Profiles  
I-Pin Su, Chin-Sheng Yu  
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- P1-111** Improvement of predicting disorder proteins based on evolutionary information and structure-based profiles.  
Su-Hwa Wu<sup>1)</sup>, Chin-Sheng Yu<sup>2)</sup>  
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- P1-112** QCM-analyses of the intermolecular interaction between prion protein N-terminal domains having increased number of octapeptide repeat  
Keiko Sato, Yuji Horiuchi, Ayami Matsushima, Yasuyuki Shimohigashi  
Laboratory of Structure-Function Biochemistry, Department of Chemistry, Faculty and Graduate School of Sciences, Kyushu University, Fukuoka, Japan

- P1-113 Inter-molecular Interactions between Adiponectin and AdipoRs**  
Ayako Takuwa<sup>1</sup>, Keiko Horikawa<sup>1</sup>, Mayumi Fukuda<sup>1</sup>, Kumiko Kumagaye<sup>2</sup>, Masanori Noda<sup>3</sup>, Susumu Uchiyama<sup>3</sup>, Takuya Yoshida<sup>1</sup>, Tadayasu Ohkubo<sup>1</sup>, Yuji Kobayashi<sup>4</sup>  
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- P1-114 Contribution of hydrophobic side-chain in cyclic tetrapeptide forming ion channel**  
Torao Suga, Satoshi Osada, Hiroaki Kodama  
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- P1-115 The considerable effects on anti-tumor activity and cell permeability of small peptides containing adamantyl group**  
Anna Miyazaki<sup>1</sup>, Mai Hori<sup>2</sup>, Ryo Saka<sup>2</sup>, Shuichi Kishimoto<sup>2</sup>, Shoji Fukushima<sup>2</sup>, Yuko Tsuda<sup>1</sup>  
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- P1-116 Synthesis and Biological Evaluation of a Novel Nonapeptide KISS1R Agonist with Testosterone-Suppressive Activity**  
Taiji Asami<sup>1</sup>, Naoki Nishizawa<sup>1</sup>, Hisanori Matsui<sup>1</sup>, Yoshihiro Ishibashi<sup>1</sup>, Kimiko Nishibori<sup>1</sup>, Yasuko Horikoshi<sup>1</sup>, Masaharu Nakayama<sup>2</sup>, Shin-ichi Matsumoto<sup>2</sup>, Naoki Tarui<sup>2</sup>, Masashi Yamaguchi<sup>2</sup>, Hirokazu Matsumoto<sup>1</sup>, Tetsuya Ohtaki<sup>1</sup>, Chieko Kitada<sup>1</sup>  
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- P1-117 Hybrid Nature of a Novel Scorpine Family Toxin Heteroscorpine-1: Conformation and Antibacterial Activity**  
Rina Patramanon, Supaluk Prasan, Borntip Plangkuntod, Sompong Thammasirirak, Sakda Daduang  
Protein and proteomics research group, Department of Biochemistry, Faculty of Science, Khon Kaen University, Thailand
- P1-118 Structure-P-glycoprotein inhibitory activity relationships of dimeric opioid peptides having Dmt-Tic pharmacophore**  
Akihiro Ambo<sup>1</sup>, Hiromichi Ohkatsu<sup>1</sup>, Motoko Minamizawa<sup>1</sup>, Hideko Watanabe<sup>1</sup>, Shigeki Sugawara<sup>1</sup>, Kazuo Nitta<sup>1</sup>, Yuko Tsuda<sup>2</sup>, Yoshio Okada<sup>2</sup>, Yusuke Sasaki<sup>1</sup>  
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- P1-119 Analytical Study on Dermcidin Peptide-Phospholipid Interaction**  
Ji Mao, Shigeru Matsuoka, Masayuki Inoue  
Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan
- P1-120 Synthesis and NMR Structure of the Marine Antibacterial Cyclic Tetrapeptide: cyclo [GSPE].**  
Annie Lim, CongBao Kang, Brian Chia  
Experimental Therapeutics Centre, A\*STAR, 31 Biopolis Way, #3-01. Singapore 138669
- P1-121 Computational study on conformation of oligopeptides containing  $\alpha$ ,  $\alpha$ -Disubstituted Amino Acids**  
Masaaki Kurihara<sup>1</sup>, Yosuke Demizu<sup>1</sup>, Yukiko Sato<sup>1</sup>, Nanako Yamagata<sup>1</sup>, Haruhiro Okuda<sup>1</sup>, Masanobu Nagano<sup>2</sup>, Mitsunobu Doi<sup>3</sup>, Masakazu Tanaka<sup>4</sup>, Hiroshi Suemune<sup>2</sup>  
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- P1-122 Synthesis and conformational analysis of homo-oligopeptides of  $\alpha$ ,  $\alpha$ -dicyclopropylglycine**  
Takashi Yamada<sup>1</sup>, Shio Fujioka<sup>1</sup>, Misai Takeda<sup>1</sup>, Shin Gohda<sup>1</sup>, Takashi Murashima<sup>1</sup>, Yasuko In<sup>2</sup>  
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- P1-123** Design of short  $\alpha$ -helical peptides for transcriptional inhibitor of nuclear receptor  
Nanako Yamagata<sup>1,2)</sup>, Yosuke Demizu<sup>1)</sup>, Yukiko Sato<sup>1)</sup>, Kazuo Nagasawa<sup>2)</sup>, Mitsunobu Doi<sup>3)</sup>, Masakazu Tanaka<sup>4)</sup>, Haruhiro Okuda<sup>1)</sup>, Masaaki Kurihara<sup>1)</sup>  
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- P1-124** Discovery and Characterization of Linear Cyclotide from *Hedyotis biflora*  
Ngan T. K. Nguyen, Wei Wang, James P. Tam  
School of Biological Sciences, Nanyang Technological University, Singapore, Singapore
- P1-125** Chirality Control in Peptide-Metal Complexes  
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Giang K. T. Nguyen, Wei Wang, James P. Tam  
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Yosuke Demizu<sup>1)</sup>, Mitsunobu Doi<sup>2)</sup>, Yukiko Sato<sup>2)</sup>, Masakazu Tanaka<sup>3)</sup>, Haruhiro Okuda<sup>1)</sup>, Masaaki Kurihara<sup>1)</sup>  
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1) Graduate Institute of Molecular Systems Biomedicine, China Medical University, Taichung, Taiwan,  
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Chi-Chun Chen, Chih-Hao Lu  
Graduate Institute of Molecular Systems Biomedicine, China Medical University, Taichung, Taiwan
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Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Seoul, Korea
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Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Seoul, Korea
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Research Institute of Pharmaceutical Science, College of Pharmacy, Seoul National University, Korea

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Shoichiro Horita<sup>1)</sup>, Jun Ishibashi<sup>2)</sup>, Koji Nagata<sup>1)</sup>, Takuya Miyakawa<sup>1)</sup>, Minoru Yamakawa<sup>2, 3)</sup>, Masaru Tanokura<sup>1)</sup>  
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 2) National Institute of Agrobiological Sciences, Tsukuba, Japan,  
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Masayuki Nara<sup>1)</sup>, Fabiana Lica Imai<sup>2)</sup>, Masaru Tanokura<sup>2)</sup>, Hisayuki Morii<sup>3)</sup>  
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- P1-136** **Computational investigations for the influence of D-aspartate residues on Amyloid  $\beta$  peptide**  
Akifumi Oda<sup>1, 2)</sup>, Kana Kobayashi<sup>1)</sup>, Ohgi Takahashi<sup>1)</sup>  
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- P1-139** **Effects of NDSB, amyloid formation inhibitor, on protein structure**  
Haimei Wang<sup>1)</sup>, Mayu Enomoto<sup>1)</sup>, Nobukazu Nameki<sup>1)</sup>, Kenji Sugase<sup>2)</sup>, Kaori Wakamatsu<sup>1)</sup>  
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- P1-140** **Isotope labeling-assisted quantitative evaluation of refolding conditions of a recombinant disulfide protein**  
Hiromasa Uchimura<sup>1)</sup>, Yusam Kim<sup>2)</sup>, Takaaki Mizuguchi<sup>2)</sup>, Yoshiaki Kiso<sup>2)</sup>, Kazuki Saito<sup>1, 3)</sup>  
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 3) RIKEN Systems and Structural Biology Center, Yokohama, Japan
- P1-141** **A  $\beta$  42 neurotoxicity is mediated by ongoing nucleated polymerization process rather than by discrete A  $\beta$  42 species**  
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- P1-142** **Low threshold of destabilization for loss of tumor suppressor activity of p53: A quantitative analysis of p53 tetramerization domain mutants**  
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- P1-143** **Hormone uptake and release of JHBP regulated by opening and closing of a gate helix on ligand-binding pocket**  
 Rintaro Suzuki<sup>1)</sup>, Zui Fujimoto<sup>1)</sup>, Takahiro Shiotsuki<sup>2)</sup>, Mitsuru Momma<sup>1)</sup>, Akira Tase<sup>1)</sup>, Wataru Tsuchiya<sup>1)</sup>, Mitsuhiko Miyazawa<sup>3)</sup>, Toshimasa Yamazaki<sup>1)</sup>  
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- P1-144** A QM/MM Molecular Dynamics Simulations Study on Cis-Trans Isomerization Process of N-Methylacetamide  
Yasushige Yonezawa, Hiromitsu Shimoyama, Haruki Nakamura  
 Institute For Protein Research, Osaka University, Suita Osaka, Japan
- P1-145** Effect of amino acid residues on membrane curvature sensing of amphipathic helix in human apolipoprotein A-I  
Masafumi Tanaka<sup>1)</sup>, Yuki Takamura<sup>1)</sup>, Toru Kawakami<sup>2)</sup>, Saburo Aimoto<sup>2)</sup>, Hiroyuki Saito<sup>3)</sup>  
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- P1-147** The Crystal Structure of the Collagen Model Peptide containing 4(S)-hydroxyproline-proline-glycine Repeats  
Daisuke Motooka<sup>1)</sup>, Kazuki Kawahara<sup>1)</sup>, Shota Nakamura<sup>2)</sup>, Masamitsu Doi<sup>3)</sup>, Yuji Nishiuchi<sup>4)</sup>, Takashi Nakazawa<sup>5)</sup>, Yoshinori Nishi<sup>6)</sup>, Tadayasu Ohkubo<sup>1)</sup>, Yuji Kobayashi<sup>6)</sup>  
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 5) Department of Chemistry, Nara Women's University, Nara, Japan,  
 6) Osaka University of Pharmaceutical Sciences, Osaka, Japan
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 Tomomi Nitta, Koji Inai, Masahito Oka  
 Liberal Arts and Sciences, Osaka Prefecture University, Sakai, Osaka, Japan
- P1-149** Theoretical conformation analysis of 4-amino-4-S-methyl-2-butenoic acid residue and its peptides  
 Takuya Kawaguchi<sup>1)</sup>, Koji Inai<sup>1)</sup>, Yoshiaki Hirano<sup>2)</sup>, Masahito Oka<sup>1)</sup>  
 1) Liberal Arts and Sciences, Osaka Prefecture University, Sakai, Osaka, Japan,  
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- P1-150** The gibberellin receptor GID1 recognition mechanism by DELLA protein  
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Koji Inai, Masahito Oka  
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Hiromichi Okura, Tsuyoshi Takahashi, Hisakazu Mihara  
 Department of Bioengineering, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama, Japan
- P1-153** Analysis of the solution structure of the human antibiotic peptide dermcidin and its interaction with phospholipid vesicles  
Jae Ha Ryu, Hyun Ho Jung, Jung Gi Lee, Ha Na Jeong, Jae Il Kim  
 School of Life Science, Gwangju Institute of Science and Technology, Korea
- P1-154** Conformational studies of transmembrane peptides in sterol-sensing domain of SCAP molecule  
Kota Sakakura, Sayaka Yamamoto, Masafumi Tanaka  
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- P1-156 Self-assembling Cyclic Hexapeptides for Peptide Nanotube Formation**  
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 Graduate School of Life Science and Systems Engineering, Kitakyushu, Japan
- P1-157 Heparin-induced conformational change in the extra-cellular domain of the precursor protein of  $\beta$ -amyloid**  
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- P1-158 A Disulfide-Linked Amyloid- $\beta$  Peptide Dimer Forms a Protofibril-like Oligomer through a Distinct Pathway from Amyloid Fibril Formation**  
Takahiro Yamaguchi<sup>1)</sup>, Hisashi Yagi<sup>2)</sup>, Yuji Goto<sup>2)</sup>, Katsumi Matsuzaki<sup>1)</sup>, Masaru Hoshino<sup>1)</sup>  
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- P1-159 Role of Leu66 in the folding of uroguanylin assisted by the pro-peptide region**  
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- P1-160 Oxidative folding of prouroguanylin**  
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- P1-161 A charge-pairing mechanism on amyloid fibrillation of human tau protein related peptides**  
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- P1-162 Effects of Choline-O-Sulfate on Amyloid Formation of hIAPP**  
Mamoru Hagihara, Ayaka Takei, Kaori Wakamatu, Nobukazu Nameki  
 Department of Chemistry and Chemical Biology, Graduate School of Engineering, Gunma University, Gunma, Japan
- P1-163 Importance of CH- $\pi$  interaction between I308 and Y310 residues in the third repeat of microtubule-binding domain for tau filament formation**  
Katsuhiko Minoura<sup>1)</sup>, Keiko Naruto<sup>1)</sup>, Ryouhei Okuda<sup>1)</sup>, Taizo Taniguchi<sup>2)</sup>, Yasuko In<sup>1)</sup>, Toshimasa Ishida<sup>1)</sup>, Koji Tomoo<sup>1)</sup>  
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- P1-164 Identification of conformational heterogeneity of Collagen Model Peptide by<sup>19</sup>F-NMR**  
Kazuki Kawahara<sup>1,6)</sup>, Nobuaki Nemoto<sup>2)</sup>, Daisuke Motooka<sup>1)</sup>, Yoshinori Nishi<sup>3)</sup>, Masamitsu Doi<sup>4)</sup>, Susumu Uchiyama<sup>5)</sup>, Takashi Nakazawa<sup>6)</sup>, Yuji Nishiuchi<sup>7)</sup>, Takuya Yoshida<sup>1)</sup>, Tadayasu Ohkubo<sup>1)</sup>, Yuji Kobayashi<sup>1,3)</sup>  
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- P1-165 Construction of proteins having pseudo-polyglutamine(polyQ) surfaces and interaction with polyQ proteins**  
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- P1-166 Exploration of the binding site of ORL1 nociceptin receptor antagonist**  
Shogo Inamine<sup>1)</sup>, Jinglan Li<sup>1)</sup>, Ayami Matsushima<sup>1)</sup>, Takeru Nose<sup>1)</sup>, Tommaso Costa<sup>2)</sup>, Yasuyuki Shimohigashi<sup>1)</sup>  
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- P1-167 Fiber formation of peptide fragments derived from spider dragline silk protein**  
Koichi Kontani<sup>1)</sup>, Mitsuhiro Miyazawa<sup>2)</sup>, Yuji Hidaka<sup>1)</sup>  
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- P1-168 Nanomolar aggregation and neurotoxicity of amyloid beta peptides with site-specific modification of oxidized cholesterol**  
Kenji Usui<sup>1, 2, 3)</sup>, John D. Hulleman<sup>3)</sup>, Evan T. Powers<sup>3)</sup>, Johan F. Paulsson<sup>3)</sup>, Sarah J. Siegel<sup>3)</sup>, Jeffery W. Kelly<sup>3)</sup>  
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- P1-169 FRET detection of oligomerization of Alzheimer's amyloid  $\beta$ -peptide using a fluorescent protein sensor**  
Tsuyoshi Takahashi, Hisakazu Mihara  
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- P1-170 Screening of cell-specific adhesion peptides for medical device coating**  
Kei Kanie<sup>1)</sup>, Ryuji Kato<sup>1)</sup>, Yuji Narita<sup>2)</sup>, Yingzi Zhao<sup>1)</sup>, Junki Owaki<sup>1)</sup>, Fumiaki Kuwabara<sup>2)</sup>, Makoto Satake<sup>3)</sup>, Susumu Honda<sup>3)</sup>, Hiroaki Kaneko<sup>3)</sup>, Hiroyuki Honda<sup>1)</sup>  
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- P1-171 A noble reagent for disulfide-coupled protein folding**  
Masaki Okumura<sup>1, 2)</sup>, Masatoshi Saiki<sup>1, 3)</sup>, Hiroshi Yamaguchi<sup>2)</sup>, Yuji Hidaka<sup>1)</sup>  
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- P1-172 Diurnal changes of arginine vasopressin-enhanced green fluorescent protein fusion transgene expression in the rat suprachiasmatic nucleus**  
Takashi Maruyama<sup>1)</sup>, Toyoaki Ohbuchi<sup>1)</sup>, Hiroaki Fujihara<sup>1)</sup>, Minoru Shibata<sup>1)</sup>, David Murphy<sup>3)</sup>, Govindan Dayanithi<sup>2)</sup>, Yoichi Ueta<sup>1)</sup>  
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- P1-173 pH-induced morphology changes of  $\beta$ -sheet-forming peptide nanostructures**  
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- P1-174 Mimotope Analysis of Human Single Chain Antibodies Cross-reacted both H1(H1N1) and H5(H5N1) subtype influenza viruses**  
JiuPian Yang<sup>1)</sup>, Yuki Kariya<sup>1)</sup>, Shuhei Hashiguchi<sup>2)</sup>, Toshihiro Nakashima<sup>2)</sup>, Kazuhisa Sugimura<sup>1)</sup>  
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- P1-175 Pigment-helix interactions suggests a maturation process of a photosynthetic protein**  
Toru Oba, [Tetsuya Sato](#), Kanae Togo, Yoshimi Yoshioka, Shinya Natori, Satoshi Ito, Kazuhisa Hiratani  
Department of Material and Environmental Chemistry, Graduate School of Engineering, Utsunomiya University, Utsunomiya, Japan
- P1-176 Elucidating effects of amphipathic peptides on cell-membrane architecture**  
[Silvia Pujals](#)<sup>1)</sup>, Kentaroh Taniuchi<sup>2)</sup>, Hiroki Miyamae<sup>1)</sup>, Masato Umeda<sup>2)</sup>, Shiroh Futaki<sup>1)</sup>  
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- P1-177 A Trp residue of opioid receptor TM5 is present at the cell membrane interface as a molecular anchor for full activation**  
[Hirokazu Nishimura](#)<sup>1)</sup>, Jinglan Li<sup>1)</sup>, Nobuko Inokuchi<sup>1)</sup>, Sayaka Koikawa<sup>1)</sup>, Ayami Matsushima<sup>1)</sup>, Takeru Nose<sup>1)</sup>, Tommaso Costa<sup>2)</sup>, Yasuyuki Shimohigashi<sup>1)</sup>  
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- P1-178 Orientation and interactions of bovine Lactoferrampin in bacterial mimic membrane as performed by molecular dynamics simulation**  
[Namsrai Javkhlantugs](#), Akira Naito, Kazuyoshi Ueda  
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- P1-179 Association-dissociation kinetics for dimerization of transmembrane helices as detected by single-molecule fluorescence microscopy**  
[Yoshiaki Yano](#), Ryota Kitani, Katsumi Matsuzaki  
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- P1-180 Endokinin C/D, human gene-derived peptide, has an anti-inflammatory effect in the rat**  
[Rumi Naono-Nakayama](#)<sup>1, 2)</sup>, Tetsuya Ikeda<sup>1)</sup>, Toshikazu Nishimori<sup>1)</sup>  
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- P1-181 Metal-assisted stabilization of the channel assembly of alamethicin: metal coordination with an additional histidine yields extremely stable channels**  
[Daisuke Noshiro](#), Koji Asami, Shiroh Futaki  
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- P1-182 Functional analysis of an  $\alpha$ -helical peptide derived from a novel mouse defensinlike gene**  
[Akira Kawaguchi](#)<sup>1, 2)</sup>, Tadaki Suzuki<sup>1, 2)</sup>, Naoki Sakai<sup>3)</sup>, Takeshi Kimura<sup>1)</sup>, Tokiyoshi Ayabe<sup>3)</sup>, Hirofumi Sawa<sup>1)</sup>, Hideki Hasegawa<sup>2, 4)</sup>  
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- P1-183 Lipid composition determines the re-alignment of antimicrobial peptides in membranes as monitored by <sup>19</sup>F-NMR**  
[Sergii Afonin](#)<sup>1)</sup>, Ralf W. Glaser<sup>2)</sup>, Carsten Sachse<sup>3)</sup>, Jesus Salgado<sup>4)</sup>, Parvesh Wadhvani<sup>1)</sup>, Marco Ieronimo<sup>5)</sup>, Katja Koch<sup>5)</sup>, Anne S. Ulrich<sup>1, 5)</sup>  
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- P1-184 Differentiating  $\alpha$ - and  $\beta$ -aspartic acid by Post Source Decay in a Curved Field Reflectron**  
[Yuzo Yamazaki](#)<sup>1)</sup>, Norihiko Fujii<sup>2)</sup>, Noriko Fujii<sup>2)</sup>  
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- P2-185**  $\alpha$ ,  $\alpha$ -Dichloroisoxazolidinones for the Synthesis and Chemoselective Peptide Ligation of  $\alpha$ -Peptide  $\alpha$ -Ketoacids  
Tetsuo Narumi<sup>1, 2)</sup>, Jeffrey W. Bode<sup>1, 3)</sup>  
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2) Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, Japan,  
3) Laboratorium für Organische Chemie, ETH-8211; Zürich, Zürich, Switzerland
- P2-186** Development of a novel thiol protecting group on the solid phase peptide synthesis and the peptide condensation reactions  
Hidekazu Katayama, Yoshiaki Nakahara, Hironobu Hojo  
Department of Applied Biochemistry, Faculty of Engineering, Tokai University, Hiratsuka, Kanagawa, Japan
- P2-187** Chemical synthesis of SUMOylated GARP domain for the functional analysis of PHR1 protein involved in phosphate starvation regulation in vascular plants  
Misako Taichi<sup>1)</sup>, Toshimasa Yamazaki<sup>2)</sup>, Tadashi Teshima<sup>1, 3)</sup>, Yuji Nishiuchi<sup>1, 3)</sup>  
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3) Graduate School of Science, Osaka University, Toyonaka, Osaka, Japan
- P2-188** Chemical Synthesis of the Functional Domain of Voltage-Gated Proton Channel  
Ken'ichiro Nakamura, Toshiaki Hara, Yuichi Akai, Takeshi Sato, Toru Kawakami, Saburo Aimoto  
Institute for Protein Research, Osaka University, 3-2 Yamadaoka, Suita, Osaka, Japan
- P2-189** Synthesis and biological evaluation of CXCL14 and its derivatives  
Kohei Tsuji<sup>1)</sup>, Yoshitake Sumikawa<sup>1)</sup>, Kosuke Tanegashima<sup>2)</sup>, Akira Shigenaga<sup>1)</sup>, Takahiko Hara<sup>2)</sup>, Akira Otaka<sup>1)</sup>  
1) Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima, Tokushima, Japan,  
2) Stem Cell Project Group, The Tokyo Metropolitan Institute of Medical Science, Tokyo Metropolitan Organization for Medical Research, Setagaya-ku, Tokyo, Japan
- P2-190** Synthesis of a lysyl tyrosylquinone fragment of crosslinked cofactor in lysyl oxidase  
Tetsuya Yamamoto<sup>1)</sup>, Kaori Kitagawa<sup>2)</sup>, Tadashi Teshima<sup>1, 3)</sup>, Tomoyuki Nakamura<sup>2)</sup>, Yuji Nishiuchi<sup>1, 3)</sup>  
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2) Department of Pharmacology, Kansai Medical University, Moriguchi, Osaka, Japan,  
3) Graduate School of Science, Osaka University, Toyonaka, Osaka, Japan
- P2-191** Site-specific fluorescent labeling of VAV by sortase-mediated transpeptidation  
Naoto Shirasu<sup>1)</sup>, Jon CD Houtman<sup>2)</sup>, Hiroshi Yamaguchi<sup>3)</sup>, Mira Barda-Saad<sup>4)</sup>, Ettore Appella<sup>5)</sup>, Peter Schuck<sup>6)</sup>, Lawrence E Samelson<sup>7)</sup>  
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7) Laboratory of Cellular and Molecular Biology, Center for Cancer Research, NCI, Bethesda, MD, USA
- P2-192** The microwave revolution: recent advances in microwave assisted peptide synthesis  
Grace S. Vanier  
Bioscience Division, CEM Corporation, Matthews, NC, USA
- P2-193** A One-Pot Approach to Neoglycopeptides Using Orthogonal Native Chemical Ligation and Click Chemistry  
Dong Jun Lee<sup>1)</sup>, Paul W. R. Harris<sup>1)</sup>, Kalyaneswar Mandal<sup>2)</sup>, Margaret A. Brimble<sup>1)</sup>, Stephen B. H. Kent<sup>2)</sup>  
1) Department of Chemistry, University of Auckland, Auckland, New Zealand,  
2) Department of Chemistry, Department of Biochemistry & Molecular Biology, Institute for Biophysical Dynamics, Gordon Centre for Integrative Research, University of Chicago, Chicago, Illinois, USA
- P2-194** Further investigations into microwave assisted solid phase peptide synthesis  
Giorgio Marini, Grace S. Vanier  
Bioscience Division, CEM Corporation, Matthews, NC, USA
- P2-195** A Novel Approach to Peptide Synthesis Using Nitrile Oxide Components  
Eriko Inokuchi, Kenji Tomita, Shinya Oishi, Hiroaki Ohno, Nobutaka Fujii  
Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan

- P2-196 Design and Synthesis of Glycolipopeptide**  
Mayuko Kuramochi<sup>1)</sup>, Ayumi Suzuki<sup>1)</sup>, Yasushi Suzuki<sup>1)</sup>, Toshiyuki Inazu<sup>1, 2)</sup>  
1) Department of Applied Chemistry, School of Engineering, Tokai University, Kanagawa, Japan,  
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- P2-197 Stereoselective synthesis of  $\beta$ -perfluoroalkyl amino acids and peptides**  
Rie Hirokane, Kanako Yamaguchi, Tomoko Yajima  
Graduate School of Humanities and Sciences, Ochanomizu University, Tokyo, Japan
- P2-198 Synthetic Study on Homophymine A, a potent anti-HIV cyclodepsipeptide**  
Junpei Ohtaka, Akinari Hamajima, Yasumasa Hamada  
Department of Pharmaceutical Chemistry, Graduate School of Pharmaceutical Science, Chiba University, Chiba, Japan
- P2-199 Solution phase synthesis of a cyclic peptide based on hydrophobic tag strategy**  
Shingo Kitada<sup>1)</sup>, Shuji Fujita<sup>2)</sup>, Shokaku Kim<sup>1)</sup>, Kazuhiro Chiba<sup>1)</sup>  
1) Department of Biological Chemistry, Graduate School of Agriculture, University of Agriculture and Technology, Fuchu, Tokyo, Japan,  
2) JITSUBO Co. Ltd., Koganei, Tokyo, Japan
- P2-200 Synthetic Combinatorial Library of Antibiotic Depsipeptides Based on the Structure of Daptomycin**  
Chuangang Qin, Jin Ren, Tingting Wei, Dawei Li, Weining Niu, Chunlan Xu, Xiaoya Shang  
Faculty of Life Science, Northwestern Polytechnical University, Xi an, China
- P2-201 Synthetic Studies on Papuamide A**  
Akinari Hamajima, Eriko Ushio, Yasumasa Hamada  
Graduate School of Pharmaceutical Sciences, Chiba university, Chiba, Japan
- P2-202 Critical evaluation of in situ coupling reagents for SPPS**  
Peter White<sup>1)</sup>, Raymond Behrendt<sup>2)</sup>  
1) Merck Chemicals, Beeston, United Kingdom,  
2) Merck & Cie, Schaffhausen, Switzerland
- P2-203 Synthetic studies on coibamide A.**  
Ryota Nabika, Shinya Oishi, Eriko Inokuchi, Hiroaki Ohno, Nobutaka Fujii  
Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan
- P2-204 Construction of an unnatural amino acids library through asymmetric alkylation of glycine or alanine ester Schiff-base utilizing Maruoka catalyst<sup>®</sup>.**  
Keisuke Matsuyama, Kenichiro Yamamoto, Sayoko Murakami, Kinsei Anzai  
Research & Development Center, Nagase & Co., Ltd., Hyogo, Japan
- P2-205 Solution-phase peptide synthesis based on hydrophobic tag strategy: facile preparation for an antagonistic peptide of TNF-  $\alpha$**   
Yohei Okada<sup>1)</sup>, Gegen Tana<sup>1)</sup>, Shingo Kitada<sup>1)</sup>, Shuji Fujita<sup>2)</sup>, Shokaku Kim<sup>1)</sup>, Kazuhiro Chiba<sup>1)</sup>  
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2) JITSUBO Co. Ltd., Tokyo, Japan
- P2-206 CONVENIENT SYNTHESIS OF PEPTIDE N-ALKYL AMIDES BY "HOPE" PROTOCOL**  
De-Xin Wang, Hao Lin, Xiao-Xiao Yang  
Institute of Materia Medica, Chinese Academy of Medical Sciences
- P2-207 Total Synthesis of Polytheonamide Mimic, an Artificial Ion Channel Peptide**  
Hiroaki Itoh, Shigeru Matsuoka, Masayuki Inoue  
Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan
- P2-208 Microwave assisted solid-phase peptide synthesis in water using water-dispersible Fmoc-amino acid nanoparticles**  
Keiko Hojo, Asaki Hara, Mare Onishi, Hideki Ichikawa, Yoshinobu Fukumori, Koichi Kawasaki  
Faculty of Pharmaceutical Sciences & Cooperative Research Center of Life Sciences, Kobe Gakuin University, Minatojima, Kobe 650-8586, Japan

- P2-209**    **Synthesis of 4-Amino-N-<sup>11</sup>CH<sub>3</sub>-phenylalanine via Reductive Amination**  
Masayuki Hanyu, Toshimitsu Fukumura  
Molecular Probe Group, Molecular Imaging Center, National Institute of Radiological Science, Chiba, Japan
- P2-210**    **AM SURETM resin: Novel Solution for Solid-phase Synthesis**  
Kyoung-Min Kim<sup>1,2)</sup>, Kyeong San<sup>2)</sup>, Sun-Jong Ryoo<sup>1)</sup>, Jang-Woong Byun<sup>1)</sup>, Ravindranath B.<sup>3)</sup>, Sandhya K.<sup>3)</sup>, Yoon-Sik Lee<sup>2)</sup>  
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2) School of Chemical and Biological Engineering, Seoul National University, 151-744 Seoul, Korea,  
3) M. D., Bharavi Laboratories(P) Ltd. Kanakapura Road Bangalore 560062, India
- P2-211**    **Synthetic Study of Desmosine and Isodesmosine, Crosslinking Amino Acids of Elastin**  
Yohei Koseki<sup>1)</sup>, Hiroto Yanuma<sup>1)</sup>, Takahiro Hayashi<sup>1)</sup>, Haruka Yamada<sup>1)</sup>, Yong Y. Lin<sup>2)</sup>, Toyonobu Usuki<sup>1)</sup>  
1) Faculty of Science & Technology, Sophia University, Tokyo, Japan,  
2) Department of Medicine, St. Luke's Roosevelt Hospital Center, Columbia University School of Physicians and Surgeons, New York, USA
- P2-212**    **Hedyotide B1: Intein-Mediated Synthesis of Thioester Precursor and Optimization of Cyclization and Oxidative Folding of a Novel Antimicrobial Cyclotide from Hedyotis Biflora**  
Clarence T. T. Wong<sup>1)</sup>, Misako Taichi<sup>2)</sup>, XinYa HeMu<sup>1)</sup>, Hideki Nishio<sup>2)</sup>, Yuji Nishiuchi<sup>2)</sup>, James P. Tam<sup>1)</sup>  
1) School of Biological Sciences, Nanyang Technological University, Singapore,  
2) SAITO Research Center, Peptide Institute, Inc., Osaka, Japan
- P2-213**    **Facile Preparation of Hydroxyproline Derivatives and Separation of Stereoisomers**  
Kanae Nakanishi, Md. Islam Nurul, Louis A. Watanabe, Norikazu Nishino  
Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, Japan
- P2-214**    **Synthesis of Boc-Gly-dehydroPhe-Gly-dehydroPhe-Gly-dehydroPhe-Gly-dehydroPhe-OMe containing(E) -dehydroPhe and(Z) -dehydroPhe. Identification of isomerisation of(E) -dehydroPhe to(Z) -dehydroPhe as a main problem**  
Pawel Kafarski<sup>1)</sup>, Maciej Makowski<sup>1)</sup>, Michal Jewginski<sup>2)</sup>, Rafal Latajka<sup>2)</sup>  
1) Faculty of Chemistry, University of Opole, Opole, Poland,  
2) Faculty of Chemistry, Wroclaw University of Technology, Wroclaw, Poland
- P2-215**    **Cyclization Test and Optimization of Cyclization Condition for Cyclic Tetrapeptides with Various Configurations**  
Satoko Matsuo, Yasuhiko Ohtsuka, Norikazu Nishino, Shokichi Ohuchi  
Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, Fukuoka, Japan
- P2-216**    **New Redox Linker For The Preparation Of Membrane Protein "Subunit c of Human F<sub>0</sub>F<sub>1</sub>-ATP Synthase"**  
Toshiaki Hara, Nao Yajima, Saburo Aimoto  
Institute for Protein Research, Osaka University, Osaka, Japan
- P2-217**    **Synthetic study of callipeltin A, an anti-HIV cyclic depsipeptide isolated from marine sponge**  
Hiroyuki Konno<sup>1)</sup>, Mari Kikuchi<sup>1)</sup>, Kakeru Maita<sup>1)</sup>, Yumiko Takatsuka<sup>1)</sup>, Kazuto Nosaka<sup>2)</sup>, Kenichi Akaji<sup>2)</sup>  
1) Department of Biochemical Engineering, Graduate School of Science and Technology, Yamagata University, Yonezawa, Japan,  
2) Department of Medicinal Chemistry, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Japan
- P2-218**    **Efficient synthesis of the scorpion toxin LaIT1 using native chemical ligation**  
Takafumi Ishido, Junya Nagao, Masahiro Miyashita, Yoshiaki Nakagawa, Hisashi Miyagawa  
Division of Applied Life Sciences, Graduate School of Agriculture, Kyoto University, Kyoto, Japan
- P2-219**    **Enantioselective synthesis of stimulus-responsive amino acid via pyrrolidinyl tetrazole catalyzed asymmetric  $\alpha$ -amination of aldehyde**  
Akira Shigenaga, Jun Yamamoto, Naomi Nishioka, Masaya Denda, Akira Otaka  
Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima, Tokushima, Japan
- P2-220**    **Practical aspects of the preparation of peptide thioesters by Fmoc SPPS**  
Raymond Behrendt<sup>1)</sup>, Peter White<sup>2)</sup>  
1) Merck & Cie, Schaffhausen, Switzerland,  
2) Merck Chemicals, Beeston, United Kingdom

- P2-221** Native chemical ligation using *N*-peptidyl anilide as *crypto*-thioester  
Kohei Sato, Shugo Tsuda, Nami Maeda, Masaya Denda, Akira Shigenaga, Akira Otaka  
Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima, Tokushima, Japan
- P2-222** Chemical Synthesis and Structure of the Prokineticin Bv8  
Thomas Durek<sup>1</sup>, Rodrigo A. V. Morales<sup>1</sup>, Norelle L. Daly<sup>1</sup>, Irina Vetter<sup>1</sup>, Mehdi Mobli<sup>1</sup>, Ian A. Napier<sup>2</sup>, David J. Craik<sup>1</sup>, Richard J. Lewis<sup>1</sup>, Macdonald J. Christie<sup>2</sup>, Glenn F. King<sup>1</sup>, Paul F. Alewood<sup>1</sup>  
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2) Brain and Mind Research Institute, The University of Sydney, Sydney, Australia
- P2-223** NOVEL COUPLING METHOD FOR THE INCORPORATION OF "COMPLEX" AMINO ACID DERIVATIVES  
Fayna Garcia-Martin<sup>1</sup>, Hiroshi Hinou<sup>1</sup>, Takahiko Matsushita<sup>1, 2</sup>, Shin-Ichiro Nishimura<sup>1, 2</sup>  
1) Graduate School of Life Science, Hokkaido University, Sapporo, Japan,  
2) Division of Functional Glycochemistry(Sumitomo Bakelite Co., Ltd), Frontier Research Center for Post-genome Science and Technology, Hokkaido University, Sapporo, Japan
- P2-224** Synthesis of K48-linked Diubiquitin Using Dual Native Chemical Ligation at Lysine  
Renliang Yang<sup>1</sup>, Kalyan K. Pasunooti<sup>2</sup>, Fupeng Li<sup>1</sup>, Xue-wei Liu<sup>2</sup>, Chuan-Fa Liu<sup>1</sup>  
1) Division of Chemical Biology and Biotechnology, School of Biological Sciences, Nanyang Technological University, Singapore.,  
2) Division of Chemistry and Biological Chemistry, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore.
- P2-225** Synthesis of nonhydrolyzable AMPylated amino acid analogues for uncovering the physiological role of AMPylation  
Keiji Ogura, Hiroko Hirakawa, Akira Shigenaga, Akiira Otaka  
Institute of Health Biosciences and Graduate School of Pharmaceutical Science, The University of Tokushima, Tokushima, Japan
- P2-226** Sortase catalyzed isopeptide ligation: Synthesis of branched and cyclic peptides  
Sayani Dasgupta<sup>1</sup>, Dinkar Sahal<sup>2</sup>, Rajendra P. Roy<sup>1</sup>  
1) National Institute of Immunology, New Delhi, India,  
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- P2-227** Synthesis of Aminoxy Substituted Serine Derivatives and Evaluation of its Complex with Sugars  
Junya Ishida, Hiroshi Hinou, Shin-Ichiro Nishimura  
Graduate School of Life Science and Frontier Research Center for Post-Genome Science and Technology, Hokkaido University, Sapporo, Japan
- P2-228** Design and synthesis of glucolipopeptides as potential cationic permeation enhancers for oral drug delivery  
Zyta M. Ziora<sup>1, 2</sup>, Julie A. Bergeon<sup>2</sup>, Adel S. Abdelrahim<sup>2</sup>, Anne R. Moss<sup>2</sup>, Istvan Toth<sup>1, 2</sup>  
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- P2-229** Synthesis of glycolipopeptides for self-assembling potential  
Zyta M. Ziora<sup>1, 2</sup>, Norbert Wimmer<sup>1</sup>, Roger New<sup>3</sup>, Istvan Toth<sup>1, 2</sup>  
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2) The University of Queensland, Centre for Integrated Preclinical Drug Development, CIPDD, TetraQ-Pharmaceutics, Brisbane, QLD 4072, Australia,  
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- P2-230** Peptidoglycan Fragments Released to the Environment; Analysis, Chemical Synthesis and Nod1 Stimulation  
Yukari Fujimoto<sup>1</sup>, Ambara R. Pradipta<sup>1</sup>, Akiko Kawasaki<sup>1</sup>, Mizuho Hasegawa<sup>2</sup>, Naohiro Inohara<sup>2</sup>, Koichi Fukase<sup>1</sup>  
1) Department of Chemistry, Graduate School of Science, Osaka University, Toyonaka, Japan,  
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- P2-231** **Probing the Charge Capability of the MIDAS: Phosphinic- and Phosphonic Acid Containing Compounds as New Potent  $\alpha$  IIb  $\beta$  3 Integrin Antagonists**  
Markus Bollinger<sup>1</sup>, Florian Manzenrieder<sup>1</sup>, Roman Kolb<sup>1</sup>, Alexander Bochen<sup>1</sup>, Luciana Marinelli<sup>2</sup>, Vittorio Limongelli<sup>2</sup>, Reinhard Pell<sup>3</sup>, Wolfgang Lindner<sup>3</sup>, Horst Kessler<sup>1</sup>  
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3) Institute of Analytical Chemistry, University of Vienna, Waehringer Strasse 38, A-1090 Vienna, Austria
- P2-232** **Design and Synthesis of Myelo peptide-1 Derived Peptides**  
Xiaoxiao Yang, Hao Lin, Dexin Wang  
Institution of Materia Medica, Chinese Academy of Medicinal Sciences, Beijing, China
- P2-233** **Molecular Imaging: Highly Active and Selective Integrin Ligands for Mapping Integrin Expression**  
Stefanie Neubauer<sup>1</sup>, Florian Rechenmacher<sup>1</sup>, Karolin Pohle<sup>2</sup>, Ambros Beer<sup>2</sup>, Hans-Juergen Wester<sup>2, 3</sup>, Horst Kessler<sup>1</sup>  
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- P2-234** **The chemical biology of the DNA binding polyamides**  
Toshikazu Bando, Hiroshi Sugiyama  
Graduate School of Science, Kyoto University
- P2-235** **Highly potent analogs of the opioid peptide H-Dmt-D-Ala-Phe-Gly-NH<sub>2</sub> using the 4- or 5-methyl-4-amino-1, 2, 3, 4-tetrahydro-2-benzazepin-3-one scaffold.**  
Rien De Wachter<sup>1</sup>, Chris de Graaf<sup>2, 3</sup>, Attila Keresztes<sup>4</sup>, Bart Vandormael<sup>1</sup>, Steven Ballet<sup>1</sup>, Geza Toth<sup>4</sup>, Didier Rognan<sup>2</sup>, Dirk Tourwe<sup>1</sup>  
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4) Institute of Biochemistry, Biological Research Center, Hungarian Academy of Sciences, Szeged, Hungary
- P2-236** **Optimization of TSG101-Binding Peptides Using X-ray Structure Data and Oxime Library Diversification**  
Sung-Eun Kim<sup>1</sup>, Andrew G. Stephen<sup>2</sup>, Young-Jun Im<sup>3</sup>, Lakshman Bindu<sup>2</sup>, Fa Liu<sup>1</sup>, Matthew J. Fivash<sup>4</sup>, Abdul A. Waheed<sup>5</sup>, Eric O. Freed<sup>5</sup>, James H. Hurley<sup>3</sup>, Robert J. Fisher<sup>3</sup>, Terrence R. Burke, Jr. <sup>1</sup>  
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- P2-237** **Click peptide: in situ production of pyroGlu-Abeta from the O-acyl isopeptide**  
Moe Yamasaki, Youhei Sohma, Atsuhiko Taniguchi, Yuta Hirayama, Miki Furuya, Hidehito Mukai, Yoshiaki Kiso  
Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Kyoto, Japan
- P2-238** **THE APPLICATION OF IMINODIACETIC ACID IN THE PEPTIDE STRUCTURE MODIFICATION**  
Hao LIN, Xiao-Xiao YANG, De-Xin WANG  
Institute of Materia Medica, Chinese Academy of Medical Sciences

- P2-239 Functionalization of Peptidomimetic Integrin Ligands with Thiols and Phosphonates for Surface Coating**  
Florian Rechenmacher<sup>1)</sup>, Stefanie Neubauer<sup>1)</sup>, Carles Mas-Moruno<sup>1)</sup>, Alexander Bochen<sup>1)</sup>, Petra Kleiner<sup>2)</sup>, Rainer Burgkart<sup>2)</sup>, Alice Schwede<sup>3)</sup>, Joachim\_P Spatz<sup>3)</sup>, Horst Kessler<sup>1)</sup>  
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- P2-240 Synthesis and Biological Evaluation of Dipeptidic Antibiotics(+)-Negamycin and Its Derivatives for Development of Duchenne Muscular Dystrophy Chemotherapy**  
Mayuko Ina<sup>1)</sup>, Takao Nomoto<sup>1)</sup>, Masataka Shiozuka<sup>2)</sup>, Akihiro Taguchi<sup>1)</sup>, Yuri Yamazaki<sup>1)</sup>, Fumika Yakushiji<sup>1)</sup>, Yoshiaki Kiso<sup>3)</sup>, Yoshiaki Nonomura<sup>2)</sup>, Ryoichi Matsuda<sup>2)</sup>, Yoshio Hayashi<sup>1)</sup>  
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 2) Department of Life Science, University of Tokyo, Japan,  
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- P2-241 Ribosomal synthesis of cyclic peptides containing various  $\gamma$ -amino acids**  
Yukinori Ohshiro<sup>1)</sup>, Eiji Nakajima<sup>2)</sup>, Yuki Goto<sup>3)</sup>, Takashi Kawakami<sup>2)</sup>, Atsushi Ohta<sup>2)</sup>, Hiroaki Suga<sup>3, 4)</sup>  
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- P2-242 Stabilized  $\alpha$ -helical peptide-catalyzed asymmetric epoxidation of chalcone derivatives**  
Masakazu Tanaka<sup>1)</sup>, Masanobu Nagano<sup>2)</sup>, Mitsunobu Doi<sup>3)</sup>, Masaaki Kurihara<sup>4)</sup>, Hiroshi Suemune<sup>2)</sup>  
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 3) Osaka University of Pharmaceutical Sciences, Osaka, Japan,  
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- P2-243 Designing direct thrombin inhibitors- glycopeptides or peptides in cancer therapy**  
Hui-Ming Yu, Yi-Yu Ke, Jen-Chine Wu, Alice Yu, CH Wong  
 Genomics Research Center, Academia Sinica, Taipei, Taiwan
- P2-244 Design and synthesis of lipopeptides and lipopeptidomimetics as novel potential drugs**  
Zyta M. Ziora<sup>1, 2)</sup>, Norbert Wimmer<sup>1)</sup>, Roger New<sup>3)</sup>, Istvan Toth<sup>1, 2)</sup>  
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 2) The University of Queensland, Centre for Integrated Preclinical Drug Development, CIPDD, TetraQ-Pharmaceutics, Brisbane, QLD 4072, Australia,  
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- P2-245 RaPID selection of Bcl-2 inhibitors from an alpha-helix non-standard peptide library assisted by an intramolecular bridge**  
Takashi Higuchi<sup>1)</sup>, Hiroaki Suga<sup>1, 2)</sup>  
 1) Research Center for Advanced Science and Technology, University of Tokyo, Tokyo, Japan,  
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- P2-246 Towards a Cyclic Tetrapeptide Library for Biological Activity Screening.**  
 Annie Lim, Ariel Ong, Brian Chia  
 Experimental Therapeutics Centre, A\*STAR, 31 Biopolis Way, #3-01. Singapore 138669
- P2-247 Solid-Phase Synthesis of Novel Anticancer Cyclic Lipopeptides**  
Gary C. Kemp, John P. Malkinson  
 Department of Pharmaceutical and Biological Chemistry, The School Of Pharmacy, University Of London, London, UK
- P2-248 Towards the routine total solid-phase synthesis of cyclic non-ribosomal peptides**  
 Ebele Ezeadi<sup>1)</sup>, Gary Kemp<sup>1)</sup>, Simon J. Dawson<sup>1, 2)</sup>, John P. Malkinson<sup>1)</sup>  
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- P2-250 Macroporous rigid polymers for industrial peptide synthesis**  
Loris Sinigoi<sup>1, 2)</sup>, Alessandra Basso<sup>1)</sup>, Paolo Braiuca<sup>1)</sup>, Debora Buzzi<sup>2)</sup>, Lucia Gardossi<sup>2)</sup>  
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- P2-251 Accelerating the discovery of nonstandard peptide inhibitors against a deacetylase powered by the RaPID display**  
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1) Department of Chemistry and Biotechnology, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan,  
2) Department of Chemistry, Graduate School of Science, The University of Tokyo, Tokyo, Japan
- P2-252 The creation of the artificial ubiquitin-ligating(E3) enzyme by using the  $\alpha$ -helical region substitution**  
Kazuhide Miyamoto<sup>1)</sup>, Kayo Togiya<sup>2)</sup>  
1) Department of Pharmaceutical Health Care, Himeji Dokkyo University, Hyogo, Japan,  
2) Hirano-machi, Himeji, Hyogo, Japan
- P2-253 Modification with Iminodiacetic acids for controlling the DNA binding of GCN4-bZIP protein by a metal ion**  
Yusuke Azuma, Miki Imanishi, Tomoyuki Yoshimura, Takeo Kawabata, Shiroh Futaki  
Institute for Chemical Research, Kyoto University, Uji, Kyoto, Japan
- P2-254 Fluorescent biomolecular probes based on Tb(III) sensitization**  
Elena Pazos<sup>1)</sup>, Anxo Vidal<sup>2)</sup>, M. Eugenio Vazquez<sup>1)</sup>, Jose L. Mascarenas<sup>1)</sup>  
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- P2-255 Structural aspects for substrate binding and fluorescence of the ATP-binding ribonucleopeptide receptors and sensors**  
Shun Nakano<sup>1)</sup>, Tsukasa Mashima<sup>1)</sup>, Masato Katahira<sup>1, 2)</sup>, Masatora Fukuda<sup>3)</sup>, Takashi Morii<sup>1, 2, 4)</sup>  
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- P2-256 Development of a bivalent ligand for a chemokine receptor CXCR4 by utilizing polyproline helix as a linker**  
Wataru Nomura<sup>1)</sup>, Tomohiro Tanaka<sup>1)</sup>, Akemi Masuda<sup>2)</sup>, Tetsuo Narumi<sup>1)</sup>, Hirokazu Tamamura<sup>1, 2)</sup>  
1) Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, Japan,  
2) Graduate School of Biomedical Science, Tokyo Medical and Dental University, Tokyo, Japan
- P2-257 Click Peptide: Application to E22  $\Delta$ -type Mutant of Amyloid  $\beta$  Peptide**  
Hui Wang, Youhei Sohma, Atsuhiko Taniguchi, Yuta Hirayama, Taeko Kakizawa, Hidehito Mukai, Yoshiaki Kiso  
Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Kyoto, Japan
- P2-258 Target-Selective Membrane Fusion System Based on a pH-Responsive Coiled Coil Assembly at the Interface of Liposomal Vesicles**  
Ayumi Kashiwada<sup>1)</sup>, Mana Tsuboi<sup>1)</sup>, Enrico Brandenburg<sup>2)</sup>, Kiyomi Matsuda<sup>1)</sup>, Beate Kokscho<sup>2)</sup>  
1) Department of Applied Molecular Chemistry, College of Industrial Technology, Nihon University, Narashino, Chiba, Japan,  
2) Institute of Chemistry and Biochemistry, Free University of Berlin, Berlin, Germany
- P2-259 Highly selective and sensitive detection of Hg(II) in 100% neutral aqueous solution by dansyl labeled amino acids**  
Chuda R. Lohani, Joung M. Kim, Mi H. Yang, Su J. Jang, Lok N. Neupane, Keun H. Lee  
Department of Chemistry, Inha University, Incheon, S. Korea
- P2-260 Design of a Sensing System for Caspase-3 Activities Using a Combination of Split-GFP and Split-Intein**  
Seiji Sakamoto, Mika Terauchi, Tanner I. Kim, Yasuyuki Araki, Takehiko Wada  
Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan

- P2-261**    **Quantitative Peptide Screening for EGF Receptor by Using a Peptide Library with Multiple Fluorescent Amino Acids**  
Takahiro Yamamoto, Mizuki Kitamatsu, Masahiko Sisido  
Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan
- P2-262**    **Recognition of methylcytosine in duplex DNA by artificial zinc finger peptide**  
Akiko Nomura<sup>1)</sup>, Akimitsu Okamoto<sup>1, 2)</sup>  
1) Advanced Science Institute, RIKEN, Saitama, Japan,  
2) PRESTO, Japan Science and Technology Agency, Saitama, Japan
- P2-263**    **Synthesis of Peptide Dendrimers Consisting of Fluorescence Groups surrounding with Dendritic Amino Acids**  
Mayumi Kitabatake, Masahiko Sisido, Mizuki Kitamatsu  
Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan
- P2-264**    **Evaluation of modified proteins for targeting exogenously prepared proteins on the cell surface**  
Kenta Teruya<sup>1)</sup>, Keiko Nishizawa<sup>2)</sup>, Yurina Endo<sup>1)</sup>, Yasunao Hattori<sup>1)</sup>, Kenichi Akaji<sup>1)</sup>, Katsumi Doh-ura<sup>2)</sup>  
1) Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Japan,  
2) Graduate School of Medicine, Tohoku University, Sendai, Japan
- P2-265**    **Properties of modularly assembled zinc finger peptides for creation of engineered transcription regulators**  
Atsushi Nakamura, Miki Imanishi, Shiroh Futaki  
Institute for Chemical Research, Kyoto University, Kyoto, Japan
- P2-266**    **Evaluation of Functional Groups as HDAC Inhibitors on Monopeptide Derivatives**  
Md. Shahidul Islam<sup>1)</sup>, Norikazu Nishino<sup>1)</sup>, Hyun Jung Kim<sup>2)</sup>, Akihiro Ito<sup>3)</sup>, Minoru Yoshida<sup>3)</sup>  
1) Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, Japan,  
2) BioRunxInc., Seoul, Republic of Korea,  
3) RIKEN, Saitama, Japan
- P2-267**    **Metal-stimulated transcriptional control system using CDH2-type zinc finger peptides**  
Tomohiro Nakaya<sup>1)</sup>, Miki Imanishi<sup>1)</sup>, Tatsuya Morisaki<sup>1)</sup>, Daisuke Noshiro<sup>1)</sup>, Yukio Sugiura<sup>2)</sup>, Shiroh Futaki<sup>1)</sup>  
1) Institute for Chemical Research, Kyoto University, Kyoto, Japan,  
2) Faculty of Pharmaceutical Sciences, Doshisha Women's University, Kyoto, Japan
- P2-268**    **Solubilization and Stabilization of Synthetic Phospholipase A2 Inhibitor Peptide(PIP-18) by Hydroxypropyl Cyclodextrin Complexations**  
Sanggu Kim<sup>1)</sup>, Wai Kiong Ng<sup>1)</sup>, Maung. Maung Thwin<sup>2)</sup>, Ponnampalam Gopalakrishnakone<sup>2)</sup>, Reginald B. H. Tan<sup>1)</sup>  
1) Formulation Science, Crystallization and Particle Science, Institute of Chemical and Engineering Sciences, A\*STAR, Singapore,  
2) Department of Anatomy, Yong Loo Lin School of Medicine, National University of Singapore, Singapore
- P2-269**    **Development of Recapturable Cleavable Linker for Efficient Enrichment and Specific Labeling of Target Proteins**  
Jun Yamamoto, Nami Maeda, Masaya Denda, Akira Shigenaga, Akira Otaka  
Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima, Tokushima, Japan
- P2-270**    **Screening of peptides that are specifically captured into cancer cells**  
Takayuki Fukuda<sup>1)</sup>, Kohei Shingai<sup>1)</sup>, Masahiko Sisido<sup>2)</sup>  
1) Department of Medical and Bioengineering, Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan,  
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- P2-271**    **Inhalable powder formulation of stabilized vasoactive intestinal peptide derivative(IK312548)**  
Yoshiki Kojo<sup>1)</sup>, Yosuke Aoki<sup>1)</sup>, Shingen Misaka<sup>1)</sup>, Takuya Matsui<sup>1)</sup>, Takahiro Mizumoto<sup>2)</sup>, Satomi Onoue<sup>1)</sup>, Shizuo Yamada<sup>1)</sup>  
1) School of Pharmaceutical Science, University of Shizuoka, Shizuoka, Japan,  
2) Product Development Section, ILS Inc., Ibaraki, Japan
- P2-272**    **MODELING OF THE ENDOSOMOLYTIC ACTIVITY OF HA2-TAT WITH RED BLOOD CELLS**  
Ya-Jung Lee, Gregory Johnson, Jean-Philippe Pellois  
Department of Biochemistry and Biophysics, Texas A & M University

- P2-273** **Inhalable powder formulation of vasoactive intestinal peptide derivative, [R15, 20, 21, L17]-VIP-GRR, attenuated neutrophilic airway inflammation in cigarette smoke-exposed rats**  
Yosuke Aoki<sup>1)</sup>, Shingen Misaka<sup>1)</sup>, Takahiro Mizumoto<sup>2)</sup>, Satomi Onoue<sup>1)</sup>, Shizuo Yamada<sup>1)</sup>  
1) School of Pharmaceutical Science, University of Shizuoka, Shizuoka, Japan,  
2) Product Development Section, ILS Inc., Ibaraki, Japan
- P2-274** **Mechanism of cancer cell death by novel hybrid TPR peptide targeting Hsp90**  
Tomohisa Horibe, Masayuki Kohno, Mari Haramoto, Koji Ohara, Koji Kawakami  
Department of Pharmacoepidemiology, Graduate School of Medicine and Public Health, Kyoto University, Kyoto, Japan.
- P2-275** **Development of glucagon-loaded PLGA nanospheres for inhalation therapy with improved pharmacokinetics and pharmacodynamics**  
Kazuki Kuriyama<sup>1)</sup>, Atsushi Uchida<sup>1)</sup>, Takahiro Mizumoto<sup>2)</sup>, Satomi Onoue<sup>1)</sup>, Shizuo Yamada<sup>1)</sup>  
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- P2-276** **Uptake and Intracellular Fate of Disulfide-Bonded Polymer Hydrogel Capsules for Doxorubicin Delivery to Colorectal Cancer Cells**  
Yan Yan<sup>1)</sup>, Edouard C. Nice<sup>2)</sup>, Angus P. R. Johnston<sup>1)</sup>, Sarah J. Dodds<sup>1)</sup>, Marloes M. J. Kamphuis<sup>1)</sup>, Charles Ferguson<sup>3)</sup>, Robert G. Parton<sup>3)</sup>, Joan K. Heath<sup>2)</sup>, Frank Caruso<sup>1)</sup>  
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3) Institute for Molecular Bioscience and Centre for Microscopy and Microanalysis, The University of Queensland, Queensland 4072, Australia
- P2-277** **Improvement of respiratory absorption of insulin and calcitonin by polyamidoamine(PAMAM) dendrimers**  
Zhengqi Dong, Hidemasa Katsumi, Toshiyasu Sakane, Akira Yamamoto  
Department of Biopharmaceutics, Kyoto Pharmaceutical University, Kyoto, Japan
- P2-278** **Effective in vitro and in vivo Antitumor Activity of Hybrid IL4-lytic Peptide**  
Liyang Yang, Tomohisa Horibe, Masayuki Kohno, Koji Kawakami  
Department of Pharmacoepidemiology, Graduate School of Medicine and Public Health, University of Kyoto, Kyoto, Japan
- P2-279** **Improvement of transdermal delivery of insulin by a novel microneedle arrays fabricated of hyaluronic acid**  
Shu Liu<sup>1)</sup>, Ying-shu Quan<sup>1, 2)</sup>, Fumio Kamiyama<sup>2)</sup>, Hidemasa Katsumi<sup>1)</sup>, Toshiyasu Sakane<sup>1)</sup>, Akira Yamamoto<sup>1)</sup>  
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- P2-280** **Neuropeptides analogues as prospective selective carriers for platinum ion in anticancer therapy**  
Aleksandra Misicka<sup>1)</sup>, Agnieszka Glowinska<sup>1)</sup>, Aleksandra Tomczyszyn<sup>1)</sup>, Katarzyna Jaworska<sup>1)</sup>, Anna Lesniak<sup>2)</sup>, Piotr Kosson<sup>2)</sup>, Marzena Lazarkiewicz<sup>2)</sup>, Ewa Matyja<sup>2)</sup>, Andrzej W. Lipkowski<sup>2)</sup>  
1) Faculty of Chemistry, Warsaw University, Warsaw, Poland,  
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- P2-281** **Direct penetration of arginine-rich peptides into cells accompanies dynamic alteration of membrane structures**  
Hisaaki Hirose, Toshihide Takeuchi, Ikuhiko Nakase, Shiroh Futaki  
Institute for Chemical Research, Kyoto University, Uji, Kyoto, Japan
- P2-282** **Generation of Endosomolytic Reagents by Branching of Cell-Penetrating Peptides: Tools for the Delivery of Bioactive Compounds to Live Cells in Cis or Trans**  
Alfredo Angeles-Boza, Alfredo Erazo-Oliveras, Ya-Jung Lee, Jean-Philippe Pellois  
Department of Biochemistry and Biophysics, Texas A & M University
- P2-283** **Novel molecular dyes for imaging the sub-cellular of labelled peptides**  
Lorraine Blackmore<sup>1, 2)</sup>, Lynda Cosgrave<sup>1)</sup>, Ciaran Dolan<sup>1)</sup>, Tia E. Keyes<sup>1)</sup>, Marc Devocelle<sup>2)</sup>  
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- P2-284 Evaluation of positively charged glucolipopeptides as oral absorption enhancers for the improvement of anionic drug delivery**  
Zyta M. Ziora<sup>1, 2)</sup>, Julie A. Bergeon<sup>2)</sup>, Adel S. Abdelrahim<sup>2)</sup>, Niklas U. Parnevi<sup>2)</sup>, Anne R. Moss<sup>2)</sup>, Istvan Toth<sup>1, 2)</sup>  
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- P2-285 Enhanced gene transfer in mouse embryonic fibroblast using a multifunctional TAT peptide-modified lysine dendron**  
Wassana Wijagkanalan<sup>1, 2, 3)</sup>, Shigeru Kawakami<sup>1)</sup>, Mitsuru Hashida<sup>1, 3)</sup>  
1) Department of Drug Delivery Research, Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan,  
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3) Institute of Integrated Cell-Material Sciences, Kyoto University, Kyoto, Japan
- P2-286 A Novel Hybrid Peptide That Binds Transferrin Receptor and Induces Rapid Permeation of Cancer Cell Membrane**  
Megumi Kawamoto, Tomohisa Horibe, Masayuki Kohno, Koji Kawakami  
Department of Pharmacoepidemiology, Graduate School of Medicine and Public Health, Kyoto University, Kyoto, Japan
- P2-287 Lipoamino acid - nucleobase conjugates for gene delivery**  
Zyta M. Ziora<sup>1, 2)</sup>, Mariusz Skwarczynski<sup>2)</sup>, Daniel J. Coles<sup>2)</sup>, I-Chun Lin<sup>2)</sup>, Istvan Toth<sup>1, 2)</sup>  
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- P2-288 Cationic Amphiphilic Polyproline Helices for Cell Penetration**  
Jean Chmielewski  
Department of Chemistry, Purdue University, West Lafayette, IN, USA
- P2-289 POTENTIATION OF THE PHOTODYNAMIC EFFECT OF CARBOXY-TETRAMETHYLRHODAMINE BY LABELING TO THE CELL-PENETRATING PEPTIDE TAT**  
Divyamani Srinivasan, Nandhini Muthukrishnan, Gregoroy Johnson, Alfredo Erazo-Oliveras,  
Jean-Philippe Pellois  
Department of Biochemistry and Biophysics, Texas A & M University
- P2-290 Development of novel cancer-specific cell penetrating peptides derived from Buforin IIb for therapeutic protein delivery**  
Ki Jung Lim, Ju Ri Shin, Da Jung Kim, Sun Chang Kim  
Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon, Korea
- P2-291 Bicyclic Tetrapeptides with Disulfide as Histone Deacetylase Inhibitors**  
Md. Ashrafal Hoque<sup>1)</sup>, Norikazu Nishino<sup>1)</sup>, Hyun-Jung Kim<sup>2)</sup>, Akihiro Ito<sup>3)</sup>, Minoru Yoshida<sup>3)</sup>  
1) Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, Japan,  
2) BioRunxInc., Seoul, Republic of Korea,  
3) RIKEN, Saitama, Japan
- P2-292 Discovery of isoform-specific cyclophilin binders powered by the RaPID system**  
Risa Ito<sup>1)</sup>, Yuki Goto<sup>2)</sup>, Hiroaki Suga<sup>1, 2)</sup>  
1) Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan,  
2) Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan
- P2-293 Small Peptide Agonists and Antagonists of the Iron-Regulatory Hormone Hepcidin**  
Piotr Ruchala, Gloria Preza, Rogelio Pinon, Elizabeta Nemeth, Tomas Ganz  
Department of Medicine, David Geffen School of Medicine at UCLA, Los Angeles, USA
- P2-294 Characterization of a novel Neuropilin-1 targeted hybrid peptide disintegrating cancer cell membrane**  
Hanae Ueyama<sup>1)</sup>, Oumi Nakajima<sup>1)</sup>, Masayuki Kohno<sup>1, 2)</sup>, Koji Ohara<sup>1)</sup>, Liying Yang<sup>1)</sup>, Tomohisa Horibe<sup>1)</sup>, Koji Kawakami<sup>1)</sup>  
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- P2-295 Correlation of structure in solution and lipid affinity of apolipoprotein A-I mimetic peptide**  
Ryuta Adachi<sup>1)</sup>, Kousuke Oniki<sup>1)</sup>, Setsuko Ando<sup>1)</sup>, Haruhiko Aoyagi<sup>2)</sup>, Satomi Abe<sup>3)</sup>, Yoshinari Uehara<sup>3)</sup>, Keiji Saku<sup>3)</sup>  
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3) Department of Cardiology, Fukuoka University School of Medicine, Fukuoka, Japan
- P2-296 Synthesis of a new apoA-I mimetic peptide inducing the dissociation of lipid-poor apoA-I from plasma HDL**  
Kohsuke Oniki<sup>1)</sup>, Ryuta Adachi<sup>1)</sup>, Satomi Abe<sup>2)</sup>, Yoshinari Uehara<sup>2)</sup>, Keiji Saku<sup>2)</sup>, Seiji Shioi<sup>3)</sup>, Setsuko Ando<sup>1)</sup>  
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- P2-297 Toward creating artificial peptides binding to HCV proteins**  
Kazuki Futai<sup>1)</sup>, Tatsuya Watanabe<sup>2)</sup>, Hiroaki Suga<sup>1,3)</sup>  
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3) Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan
- P2-298 Novel antimicrobial peptides as potential topical agents**  
Da Jung Kim, SuA Jang, Bong Hyun Sung, Ki Jung Lim, Ju Ri Shin, Sun Chang Kim  
Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon, Korea
- P2-299 Synthesis and Evaluation of Small Peptide Inhibitors for SARS 3CL Protease**  
Hiroyuki Konno<sup>1)</sup>, Manabu Ishii<sup>1)</sup>, Yasunao Hattori<sup>2)</sup>, Kazuto Nosaka<sup>2)</sup>, Kenichi Akaji<sup>2)</sup>  
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2) Department of Medicinal Chemistry, Graduate School of Science, Kyoto Prefectural University of Medicine, Kyoto, Japan
- P2-300 Structure Activity Relationship Study of SARS Coronavirus 3CL Protease Inhibitors with an Electrophilic Aryl Ketone Structure**  
Sho Konno<sup>1)</sup>, Kiyohiko Nakada<sup>1)</sup>, Rie Kakiuchi<sup>1)</sup>, Yuri Yamazaki<sup>1)</sup>, Fumika Yakushiji<sup>1)</sup>, Koushi Hidaka<sup>2)</sup>, Yoshiaki Kiso<sup>2)</sup>, Kenichi Akaji<sup>3)</sup>, Yoshio Hayashi<sup>1)</sup>  
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- P2-301 Design and preparation of the tetrapeptides as low molecular sized BACE1 inhibitors**  
Taeko Kakizawa, Koushi Hidaka, Daisuke Hamada, Ryoji Yamaguchi, Tsuyoshi Uemura, Hitomi Kitamura, Harichandra D. Tagad, Takashi Hamada, Zyta Ziora, Yoshio Hamada, Tooru Kimura, Yoshiaki Kiso  
Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Yamashina-ku, Kyoto 607-8412, Japan.
- P2-302 Tripeptidic BACE1 inhibitors by conformational structure-based design**  
Yoshio Hamada, Harichandra D. Tagad, Takashi Hamada, Tooru Kimura, Yoshiaki Kiso  
Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Kyoto, Japan
- P2-303 Phenyl(cyclo) alkyl amines: Second generation P1' position analogs for pentapeptidic BACE1 inhibitors**  
Harichandra D. Tagad, Yoshio Hamada, Koushi Hidaka, Youhei Sohma, Tooru Kimura, Yoshiaki Kiso  
Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Kyoto, Japan
- P2-304 Can the substrate of an enzyme turn into its inhibitor by vastly-reduced kcat value?**  
Yoshio Hamada, Harichandra D. Tagad, Takashi Hamada, Tooru Kimura, Yoshiaki Kiso  
Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Kyoto, Japan
- P2-305 Design of BACE1 inhibitors containing 5-nitro isophthalamide**  
Tomoya Nakanishi, Yoshio Hamada, Ryoji Yamaguchi, Makoto Yamaguchi, Takashi Hamada, Koushi Hidaka, Tooru Kimura, Yoshiaki Kiso  
Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Kyoto, Japan

- P2-306 Affinity precipitation system for serine proteases: Purification and characterization of chymotrypsin from fish**  
Seigo Furuta<sup>1)</sup>, Jyunya Murai<sup>1)</sup>, Hirofumi Kuroda<sup>2)</sup>, Hiroshi Oyama<sup>3)</sup>, Shin Ono<sup>1)</sup>  
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3) Faculty of Science and Engineering, University of Setsunan, Osaka, Japan
- P2-307 Novel BACE1 inhibitors containing P1-P1' non-natural amino acid-guanidinyl analogues**  
Kenji Suzuki<sup>1)</sup>, Yoshio Hamada<sup>1)</sup>, Megumi Ogata<sup>1)</sup>, Takashi Hamada<sup>1)</sup>, Satoshi Nojima<sup>2)</sup>, Naoya Kinomura<sup>2)</sup>, Tsutomu Mimoto<sup>2)</sup>, Yoshiaki Kiso<sup>1)</sup>  
1) Department of Medicinal Chemistry, Center for Frontier Research in Medicinal Science, Kyoto Pharmaceutical University, Kyoto, Japan,  
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- P2-308 A class of novel plasmin inhibitor**  
Keigo Gohda<sup>1)</sup>, Naoki Teno<sup>2)</sup>, Keiko Wanaka<sup>3)</sup>, Yuko Tsuda<sup>4, 5)</sup>  
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5) Life Science Center for Cooperative Research, Kobe Gakuin University, Kobe, Japan
- P2-309 A membrane type-1 matrix metalloproteinase cleaves the synthetic fragment peptides of prion protein, and that is inhibited by the copper ion.**  
Aya Kojima, Yasunori Mabuchi, Rika Okihara, Makoto Nagano, Motomi Konishi, Toshifumi Akizawa  
Department of Analytical Chemistry, Faculty of Pharmaceutical Sciences, Setsunan University, Osaka, Japan
- P2-310 Structure of HIV-1 Protease in Complex with Potent Inhibitor KNI-272 Determined by Neutron Crystallography**  
Motoyasu Adachi<sup>1)</sup>, Takashi Ohhara<sup>1)</sup>, Kazuo Kurihara<sup>1)</sup>, Taro Tamada<sup>1)</sup>, Eijiro Honjo<sup>1)</sup>, Nobuo Okazaki<sup>1)</sup>, Shigeki Arai<sup>1)</sup>, Yoshinari Shoyama<sup>1)</sup>, Hiroyoshi Matsumura<sup>2, 3, 4)</sup>, Hiroaki Adachi<sup>2, 3, 4)</sup>, Kazufumi Takano<sup>2, 3, 4)</sup>, Yusuke Mori<sup>2, 3, 4)</sup>, Koushi Hidaka<sup>5)</sup>, Tooru Kimura<sup>5)</sup>, Yoshio Hayashi<sup>5)</sup>, Yoshiaki Kiso<sup>5)</sup>, Ryota Kuroki<sup>1)</sup>  
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3) CREST JST, Suita, Osaka, Japan,  
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- P2-311 Optimization of peptidomimetic plasmepsin inhibitor containing allophenylnorstatine using basic substituent for malaria treatment**  
Takuya Miura<sup>1)</sup>, Koushi Hidaka<sup>1)</sup>, Keisuke Kashimoto<sup>1)</sup>, Yuto Hori<sup>1)</sup>, Yukiko Azai<sup>1)</sup>, Yuko Kawasaki<sup>2)</sup>, Adam J. Ruben<sup>2)</sup>, Ernesto Freire<sup>2)</sup>, Tooru Kimura<sup>1)</sup>, Yoshiaki Kiso<sup>1)</sup>  
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- P2-312 Aminophosphinic acids and phosphinopeptides as bacterial urease inhibitors**  
Lukasz Berlicki<sup>1)</sup>, Stamatia Vassiliou<sup>2)</sup>, Paulina Kosikowska<sup>1)</sup>, Agnieszka Grabowiecka<sup>1)</sup>, Pawel Kafarski<sup>1)</sup>  
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- P2-313 Human Antimicrobial Peptide LL-37 Elicits Multiple Stresses in Candida albicans**  
Pei-Wen Tsai<sup>1)</sup>, Yin-Lien Cheng<sup>1)</sup>, Hao-Teng Chang<sup>3, 4)</sup>, Chung-Yu Lan<sup>1, 2)</sup>  
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- P2-314 Antagonist design of gelatinase biosynthesis-activating pheromone of *Enterococcus faecalis* based on reverse alanine scanning**  
Ryoji Yokohata<sup>1)</sup>, Mami Sato<sup>1)</sup>, Kenzo Nishiguchi<sup>1)</sup>, Kenji Sonomoto<sup>1, 2)</sup>, Jiro Nakayama<sup>1)</sup>  
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- P2-315 Self-assembling peptide nanofibers responsive to calcium ion for biomaterial scaffolds**  
Masaki Tsuchiya, Toshiki Sawada, Tsuyoshi Takahashi, Hisakazu Mihara  
Department of Bioengineering, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama, Japan

- P2-316** Development of antimicrobial microorganisms with multimeric antimicrobial peptides displayed on the cell surface for in vivo killing of pathogenic microorganisms  
Ju Ri Shin, Ki Jung Lim, Da Jung Kim, Sun Chang Kim  
Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon, Korea
- P2-317** Structural modification of 2-aminoisobutylic acid containing peptides toward an acquiring of antimicrobial activities against pathogenic bacteria  
Junichi Taira<sup>1</sup>, Yutaka Kida<sup>3</sup>, Hiroshi Yamaguchi<sup>2</sup>, Koichi Kuwano<sup>3</sup>, Yuichiro Higashimoto<sup>1</sup>, Hiroaki Kodama<sup>2</sup>  
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2) Department of Chemistry, Faculty of Science and Engineering, Saga University, Saga, Japan,  
3) Division of Microbiology, Department of Infectious Medicine, Kurume University School of Medicine, Kurume, Japan
- P2-318** Crystal structures of inhibitor complexes of human T cell leukemia virus(HTLV-1) protease  
Alla Gustchina<sup>1</sup>, Tadashi Satoh<sup>1</sup>, Mi Li<sup>1</sup>, Jeffrey-Tri Nguyen<sup>2</sup>, Yoshiaki Kiso<sup>2</sup>, Alexander Wlodawer<sup>1</sup>  
1) Macromolecular Crystallography Laboratory, National Cancer Institute, Frederick, MD, USA,  
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- P2-319** High through put screening system for histone methyltransferase inhibitors  
Chi Hongfang<sup>1</sup>, Tienabe Nsiama<sup>1</sup>, Norikazu Nishino<sup>1</sup>, Yasushi Takemoto<sup>2</sup>, Akihiro Ito<sup>2</sup>, Minoru Yoshida<sup>2</sup>  
1) Graduate school of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, Japan,  
2) RIKEN, Wako, Japan
- P2-321** Design and characterization of a novel peptide binder showing high affinity and selectivity for target molecule  
Sunghyun Kim, Daejin Kim, Sangyong Jon  
Department of Life Science, Gwangju Institute of Science and Technology, Gwangju, South Korea
- P2-322** Comparison of ELISA development for Haemophilus influenzae type b using different method in isolating the capsular antigen  
Nurul Ashikin Mohamed Rawi, Zaini Mohd Zain  
Institute of Medical Molecular Biotechnology, Faculty of Medicine, University Technology MARA, Selangor, Malaysia
- P2-323** Development of MT1-MMP specific peptide substrate for the risk assessment of cancer metastasis and malignancy  
Rika Okihara, Aya Kojima, Makoto Nagano, Motomi Konishi, Toshifumi Akizawa  
Department of Analytical Chemistry, Faculty of Pharmaceutical Sciences, Setsunan University, Osaka, Japan
- P2-324** Human IgA-binding peptide from random peptide library: its application for affinity purification of IgA  
Takaaki Hatanaka<sup>1</sup>, Sayaka Kakoi<sup>1</sup>, Ryohei Sugita<sup>1</sup>, Kotaro Sakamoto<sup>2</sup>, Kazuhisa Sugimura<sup>2</sup>, Kazunari Arima<sup>1</sup>, Hiroaki Asai<sup>3</sup>, Takae Yamada<sup>4</sup>, Yuji Ito<sup>1, 2</sup>  
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4) Corporate Research and Development, Otsuka Chemical Co., Ltd., Tokushima, Japan
- P2-325** Remove  $\beta$  2 Microglobulin ( $\beta$  2m) by Peptide Conjugated PEI/PMMA Nano Fiber  
Hyung-Seok Jang, Yong-Sun Park, Yoon-Sik Lee  
Department of Chemical & Biological Engineering, Seoul National University, Seoul, Korea
- P2-326** Syntheses of Fluorescent Peptides Labeled with 7-Diethylaminocoumarin and Their Photophysical Properties in Liposome Membranes  
Tokiko Murase, Toshitada Yoshihara, Keiichi Yamada, Seiji Tobita  
Department of Chemistry and Chemical Biology, Graduate School of Engineering, Gunma University, Kiryu, Japan
- P2-327** Interaction of glycopeptide-modified Au nanoparticles with lectin proteins  
Hiroyuki Okusa<sup>1</sup>, Hyejin Park<sup>1</sup>, Tsuyoshi Takahashi<sup>1</sup>, Hideya Yuasa<sup>2</sup>, Hisakazu Mihara<sup>1</sup>  
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- P2-328** **Stabilizing the eIF4G1 alpha-helix with helix-inducing amino acids to increase binding affinity to eIF4E.**  
Chris Brown<sup>1</sup>, JJ Lim<sup>1</sup>, Thomas Leonard<sup>3</sup>, Annie Lim<sup>2</sup>, Brian Chia<sup>2</sup>, Chandra Verma<sup>3</sup>, David Lane<sup>1</sup>  
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3) Bioinformatics Institute, A\*STAR, 30 Biopolis Street, #7-01. Singapore 138671
- P2-329** **Effect of Peptide Oligomerization Mediated by p53 Tetramerization Domain on Biomineralization Activity**  
Tatsuya Sakaguchi, Rui Kamada, Kazuyasu Sakaguchi  
Laboratory of Biological Chemistry, Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo 060-0810, Japan
- P2-330** **Sensitive heme sensor using fluorescent-labeled heme oxygenase-1**  
Shinya Koga<sup>1</sup>, Yuichiro Higashimoto<sup>2</sup>, Masato Noguchi<sup>3</sup>, Hideyuki Komatsu<sup>1</sup>, Hiroshi Sakamoto<sup>1</sup>  
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3) Department of Medical Biochemistry, Kurume University School of Medicine, Kurume, Japan
- P2-331** **Combination of RGDS and  $\beta$ -strand peptide for tissue engineering scaffolds**  
Masanobu Wada, Yoshiaki Hirano  
Faculty of Chemistry, Materials and Bioengineering, Kansai University, Osaka, Japan
- P2-332** **Surfaces for Immobilization of N-Terminal Cysteine Derivatives via Native Chemical Ligation**  
Sally Anderson  
Sharp Laboratories of Europe Ltd, Oxford, UK
- P2-333** **Aligned Peptide Nanotubes by Cyclic  $\beta$ -Peptides Having Chromophores for Association**  
Yusuke Ishihara, Shunsaku Kimura  
Department of Material Chemistry, Graduate school of Engineering, Kyoto University, Kyoto, Japan
- P2-334** **Generation of an immune antibody phage-display-library directed to narcotics**  
Miho Matsukizono<sup>1, 2</sup>, Mariko Kamegawa<sup>2</sup>, Koichi Tanaka<sup>1</sup>, Shinya Kohra<sup>3</sup>, Koji Arizono<sup>4</sup>, Kazuhisa Sugimura<sup>1</sup>  
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3) Faculty of Environmental Studies, Nagasaki University, Nagasaki 852-8521, Japan,  
4) Division of Food and Health Environment, Prefectural University of Kumamoto, Kumamoto 862-8502, Japan
- P2-335** **Self-assembling  $\beta$ -sheet peptides as a cross-linker for alginate hydrogel**  
Naotaka Nishimura, Yoshiaki Hirano  
Faculty of Chemistry, Materials and Bioengineering, Kansai University, Osaka, Japan
- P2-336** **First-principles study on metal-ion clathrate in peptide nanorings**  
Akio Yano, Yasuhiro Suzuki, Ryosuke Hyogo, Kyozauro Takeda  
Department of Electrical Engineering and Bioscience, Waseda University, Tokyo, Japan
- P2-337** **Is it possible to play the violin using spider silk?**  
Shigeyoshi Osaki  
School of Medicine, Nara Medical University, Nara, Japan
- P2-338** **Design of stimulus-responsive hydrogels using self-assembling  $\beta$ -hairpin peptides**  
Shinpei Oota, Yoshiaki Hirano  
Faculty of Chemistry, Materials and Bioengineering, Kansai University, Osaka, Japan
- P2-341** **Controlling initiation position of amyloid nanowire using a gold nanoparticle**  
Hiroki Sakai, Ken Watanabe, Yoshiro Chuman, Kazuyasu Sakaguchi  
Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Japan
- P2-342** **Why does the spider silk have an excellent UV resistivity?**  
Takashi Matsuhira, Keizo Yamamoto, Shigeyoshi Osaki  
School of Medicine, Nara Medical University, Nara, Japan

- P2-343** Cell penetrability with alpha-helical peptides conjugated with gold nanospheres and detection using dark field microscopy  
Hyejin Park, Takuya Kikuchi, Tsuyoshi Takahashi, Hisakazu Mihara  
Department of Bioengineering, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama, Japan
- P2-344** Development of a Solid-supported Biotinylation Reagent for the Efficient Biotin Labeling to the SH group of Peptides and Small Molecules  
Kentarou Fukumoto<sup>1, 2)</sup>, Kumi Adachi<sup>1)</sup>, Yuri Yamazaki<sup>1)</sup>, Fumika Yakushiji<sup>1)</sup>, Yoshio Hayashi<sup>1)</sup>  
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- P2-345** Surface-Modifiable Two-Dimensional Films Containing the Collagen-Like Triple-Helical Peptides  
Shunsuke Matsui, Chisato M. Yamazaki, Takaki Koide  
Department of Chemistry and Biochemistry School of Advanced Science and Engineering, Waseda University, Tokyo, Japan
- P2-346** Separation of Single-walled carbon nanotube: Effect of Electron-Donating and Electron-Withdrawing Groups on Modified Agarose Bead/Single-Walled Carbon Nanotube Interaction  
Yong-Sun Park, Hyung Suk Jang, Kyeong San, Jaehi Kim, Yoon-Sik Lee  
School of Chemical and Biological Engineering, Seoul National University, Seoul, Korea
- P2-347** Construction of elastin-like peptide expression vector using Bbs I restriction enzyme for neural regeneration  
Sachiro Kakinoki<sup>1, 2)</sup>, Tetsuji Yamaoka<sup>1, 2)</sup>  
1) Department of Biomedical Engineering, National Cardiovascular Center Research Institute, Osaka, Japan,  
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- P2-348** Cell adhesion and tissue regeneration on poly(lactic acid) -based scaffolds modified with oligo(lactic acid) -oligo peptide amphiphilic conjugates  
Tetsuji Yamaoka<sup>1, 2)</sup>, Sho Uchida<sup>1, 2)</sup>, Sachio Kakinoki<sup>1, 2)</sup>, Atsushi Mahara<sup>1, 2)</sup>  
1) Department of Biomedical Engineering, National Cardiovascular Center Research Institute, Osaka, Japan,  
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- P2-349** Peptides in an Antihypertensive Food Made from Buckwheat  
Masahiro Koyama<sup>1)</sup>, Kyoko Naramoto<sup>2)</sup>, Kozo Nakamura<sup>2)</sup>  
1) Department of Bioscience and Food Production Science, Interdisciplinary Graduate School of Science and Technology, Shinshu University, Nagano, Japan,  
2) Department of Bioscience and Biotechnology, Graduate School of Agriculture, Shinshu University, Nagano, Japan
- P2-350** Regulation of blood pressure, plasma lipids, and blood sugar by bioactive peptides from freshwater clam hydrolysate  
Yu-Hsin Lin, Jenn-Shou Tsai, Tzyy-Ching Lin, Chia-Hui Wang, Bonnie Sun Pan  
Department of Food Science, National Taiwan Ocean University
- P2-351** Enhanced Antioxidant Activities of Caffeic Acid by Peptide Conjugation  
Seon-Yeong Kwak, Yoon-Sik Lee, Song Lee  
Department of Chemical and Biological engineering, Seoul National University, Seoul, Korea
- P2-352** Dual Effects of Caffeoyl - Amino acid - Hydroxamic acids Derivatives as Antioxidizing and Depigmenting Agent  
Song Lee, Seon-Yeong Kwak, Yoon-Sik Lee  
Department of Chemical and Biological Engineering, Graduate School of Engineering, Seoul National University, Seoul, South Korea
- P2-353** Stimulation of memory-consolidation by ACE-inhibitory peptides derived from food proteins  
Soushi Sonoda<sup>1)</sup>, Hui Zhao<sup>1)</sup>, Hiroyuki Fujita<sup>2)</sup>, Masaaki Yoshikawa<sup>1, 3)</sup>  
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2) Nippon Supplement Inc., Osaka, Japan,  
3) Kyoto University, Kyoto, Japan

- P2-354** **A Non-proteinogenic Amino Acid, Mimosine and Mimosyl Peptides for Cosmeceutical Ingredients**  
Kiyoshi Nokihara<sup>1)</sup>, Akiyoshi Hirata<sup>1)</sup>, Yukiko Kodama<sup>2)</sup>, Tetsuya Sogon<sup>1)</sup>, Hiroaki Aoyama<sup>2)</sup>, Takafumi Ohyama<sup>1)</sup>, Jimmy Pang<sup>3)</sup>, Wei-Jing Hung<sup>4)</sup>  
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2) HiPep Okinawa Laboratory, Uruma-city, Japan,  
3) Taiwan AC Scientific Inc., Taipei, Taiwan,  
4) Chia-Nan University, Tainan, Tainan
- P2-355** **Species identification of causative Lutjanidae fish for a food poisoning in Taiwan by SDS-PAGE and PCR-RFLP techniques**  
Wen-Feng Lin, Yao-Cheng Lyu, Deng-Fwu Hwang  
Department of Food Science, National Taiwan Ocean University, Keelung, Taiwan
- P2-356** **Using Protein Electrophoretic Pattern for Species Identification of Moray Eel Meat**  
Yun-Chieh Huang<sup>1)</sup>, Sen-Shyong Jeng<sup>1)</sup>, Tai-Yuan Chan<sup>1)</sup>, Hong-Ming Chen<sup>2)</sup>, Deng-Fwu Hwang<sup>1)</sup>  
1) Department of Food Science, National Taiwan Ocean University, Keelung, Taiwan,  
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- P2-357** **Studies on Hemolysis of Venom from Stonefish in Taiwan**  
Deng-Fwu Hwang<sup>1)</sup>, Ya-Hui Chiu<sup>1)</sup>, Yu-Huai Chang<sup>1)</sup>, Yun-Chieh Huang<sup>1)</sup>, Tai-Yuan Chan<sup>1)</sup>, His-Pin Lin<sup>2)</sup>  
1) Department of Food Science, National Taiwan Ocean University, Keelung, Taiwan,  
2) Department of Food Science, Yuanpei University, Hsinchu, Taiwan
- P2-358** **Synthesis and characterization of antimicrobial peptide surfactant with dendritic lysine groups**  
Junko Kuwahara<sup>1)</sup>, Yuji Tanaka<sup>2)</sup>, Hideo Akisada<sup>2)</sup>, Tamaki Kato<sup>3)</sup>, Norikazu Nishino<sup>3)</sup>  
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- P2-359** **PNA gamma sulphate: introducing charges on the backbone**  
Alessandra Romanelli  
Department of Biological Sciences, University of Naples Federico II, Naples, Italy
- P2-360** **Synthesis of 4-substituted chiral PNA monomers**  
Toru Sugiyama<sup>1)</sup>, Yasutada Imamura<sup>2)</sup>, Yosuke Demizu<sup>3)</sup>, Masaaki Kurihara<sup>3)</sup>, Masashi Takano<sup>4)</sup>, Atsushi Kittaka<sup>4)</sup>  
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- P2-361** **Molecular Imaging with functionalized PNA monomers ligated to our BioShuttle delivery and targeting platform.**  
Ruediger Pipkorn<sup>1)</sup>, Manfred Wiessler<sup>2)</sup>, Waldemar Waldeck<sup>3)</sup>, Mario Koch<sup>1)</sup>, Klaus Braun<sup>2)</sup>  
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- P2-362** **Prediction of peptide retention times. Application of on-line available program for compounds separated using low trifluoroacetic acid content in mobile phase**  
Jerzy Dziuba, Piotr Minkiewicz, Damir Mogut  
Chair of Food Biochemistry, University of Warmia and Mazury in Olsztyn, Olsztyn, Poland
- P2-363** **A method for selective isolation of N-terminal peptide from N-blocked protein by the combination of AspN digestion, transamination, and tosylhydrazine glass treatment**  
Kazuhiro Sonomura<sup>1, 2)</sup>, Hiroki Kuyama<sup>1)</sup>, Ei-ich Matsuo<sup>1, 2)</sup>, Susumu Tsunasawa<sup>1)</sup>, Shiroh Futaki<sup>3)</sup>, Osamu Nishimura<sup>1)</sup>  
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- P2-364** Screening methodology for discovery of inhibitory peptides against pathogenic proteins using a plug-plug affinity capillary electrophoresis technique  
Kazuki Saito<sup>1, 2)</sup>, Mamiko Nakato<sup>3)</sup>, Takaaki Mizuguchi<sup>3)</sup>, Shinji Wada<sup>3)</sup>, Hiromasa Uchimura<sup>1)</sup>, Shigeyuki Yokoyama<sup>2, 4)</sup>, Hiroshi Hirota<sup>2)</sup>, Yoshiaki Kiso<sup>3)</sup>  
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- P2-365** A simple and rapid analysis of disulfide bonds in proteins using thermostable protease-immobilized microfluidic reactors integrated with MS  
Masaya Miyazaki<sup>1, 2)</sup>, Hiroshi Yamaguchi<sup>1)</sup>, Hideaki Maeda<sup>1, 2)</sup>  
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2) Department of Molecular and Material Sciences, Interdisciplinary Graduate School of Engineering Science, Kyushu University, Kasuga, Fukuoka, Japan
- P2-366** Versatile chiral auxiliaries for NMR spectroscopy based on phosphoryl derivatives of quinine  
Ewa Rudzinska, Lukasz Gorecki, Lukasz Berlicki, Artur Mucha, Pawel Kafarski  
Department of Bioorganic Chemistry, Faculty of Chemistry, Wroclaw University of Technology, Wroclaw, Poland
- P2-367** Comparison of 2-D RP-RP MS/MS with 1-D RP MS/MS for proteomic analysis  
Pyong-Gon Moon<sup>1)</sup>, Young-Eun Cho<sup>1)</sup>, Thoudam S. K. Singh<sup>2)</sup>, Sang-Hyun Kim<sup>2)</sup>, Moon-Chang Baek<sup>1)</sup>  
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2) Department of Pharmacology, School of Medicine, Kyungpook National University
- P2-368** Packing materials with advanced technologies (high strength, modified silica gel design) for preparative HPLC separation of peptide and protein  
Masakatsu Omote, Takatomo Takai, Noriko Shoji, Naohiro Kuriyama  
YMC Co. Ltd., Ishikawa, Japan
- P2-369** Development of Stimulus Responsive Thiol Releasing System for Controlling Activity of Cysteine Protease  
Ko Morishita<sup>1)</sup>, Keiko Yamaguchi<sup>1)</sup>, Hao Ding<sup>1)</sup>, Akira Shigenaga<sup>1)</sup>, Kenichi Akaji<sup>2)</sup>, Akira Otaka<sup>1)</sup>  
1) Institute of Health Biosciences and Graduate School of Pharmaceutical Sciences, The University of Tokushima, Tokushima, Japan,  
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- P2-370** A newly developed hydrophilic polymer-based ion exchange chromatography media and purification of Immunoglobulin Y from egg yolk  
Masakatsu Omote, Akiko Matsui, Saoko Nozawa, Taeko Nakajima, Noriko Shoji, Naohiro Kuriyama  
YMC Co. Ltd., Ishikawa, Japan
- P2-371** Discrimination of Golgi type II membrane proteins focusing on their membrane spanning peptide sequences  
Masao Yoshizawa, Takanori Sasaki, Yuri Mukai-Ikeda  
Department of Electronics and Bioinformatics, School of Science and Technology, Meiji University, Kawasaki, Japan
- P2-372** The BIOPEP database as a source of information concerning food peptides and proteins: current status  
Jerzy Dziuba, Piotr Minkiewicz, Malgorzata Darewicz, Anna Iwaniak, Marta Dziuba, Justyna Michalska  
Chair of Food Biochemistry, University of Warmia and Mazury in Olsztyn, Olsztyn, Poland
- P2-373** Discrimination of GPI-anchored proteins using artificial neural network  
Hirotaaka Tanaka, Masao Yoshizawa, Takanori Sasaki, Yuri Mukai-Ikeda  
Department of Electronics and Bioinformatics, School of Science and Technology, Meiji University, Kawasaki, Japan
- P2-374** Increased upregulation of target genes by using self-propagating artificial transcription factors  
Tomoaki Mori, Jun Sasaki, Yoshiaki Saito, Yasuhiro Aoyama, Takashi Sera  
Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan

- P2-375** A novel oxidation reaction and its application to Fmoc solid phase synthesis of therapeutic photosensitizers  
Takanori Fukusumi<sup>1)</sup>, Satoshi Ito<sup>1)</sup>, Kazuhisa Hiratani<sup>1)</sup>, Hitoshi Tamiaki<sup>2)</sup>, Tsukasa Ikeda<sup>1)</sup>, Toru Oba<sup>1)</sup>  
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- P2-376** Thermodynamic and structural analysis of PPAR  $\gamma$ -ligand interaction  
Takahiro Maruno<sup>1)</sup>, Ryo Takahashi<sup>2)</sup>, Chiho Hosokawa<sup>1)</sup>, Daisuke Motooka<sup>1)</sup>, Kazuki Kawahara<sup>1, 3)</sup>, Mitsuhiro Nishimura<sup>7)</sup>, Shusaku Harada<sup>1)</sup>, Yuji Nishiuchi<sup>4)</sup>, Shota Nakamura<sup>5)</sup>, Susumu Uchiyama<sup>6)</sup>, Takuya Yoshida<sup>1)</sup>, Tadayasu Ohkubo<sup>1)</sup>, Tadanori Yoshimatsu<sup>2)</sup>, Kiichi Fukui<sup>6)</sup>, Yuji Kobayashi<sup>7)</sup>  
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5) Research Institute for Microbial Diseases, Osaka University, Osaka, Japan,  
6) Graduate School of Engineering, Osaka University, Osaka, Japan,  
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- P2-377** ANG2002: Synthesis of a new neurotensin-Angiopep-2 conjugate with increased brain penetration and analgesic properties  
Carine Thiot<sup>1)</sup>, Christian Ché<sup>1)</sup>, Michel Demeule<sup>1)</sup>, Anthony Régina<sup>1)</sup>, Sich Dung Lao<sup>1)</sup>, Richard Béliveau<sup>2)</sup>, Jean-Paul Castaigne<sup>1)</sup>  
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2) Laboratoire de Médecine Moléculaire, Université du Québec à Montréal, Québec, Canada
- P2-378** pH-sensitive targeted fluorescent probes using fibronectin-mimetic peptide-dendron conjugates: Synthesis and characterization  
Mariko Kuroda<sup>1)</sup>, Wassana Wijagkanalan<sup>1, 2, 3)</sup>, Shigeru Kawakami<sup>1)</sup>, Mitsuru Hashida<sup>1, 3)</sup>  
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3) Institute of Integrated Cell-Material Sciences, Kyoto University, Kyoto, Japan
- P2-379** Highly enhanced silencing of bcr/abl gene by siRNA-NES peptide conjugates  
Masayuki Fujii, Yuichi Akagi  
Department of Biological & Environmental Chemistry, School of Humanity Oriented Science and Technology, Kinki University, 11-6 Kayanomori, Iizuka, Fukuoka 820-8555, Japan
- P2-380** Synthesis of and gene silencing by oligonucleotide-peptide conjugates  
Masayuki Fujii  
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- P2-381** Synthesis of oligonucleotide-peptide conjugates by solid phase fragment condensation  
Masayuki Fujii, Hirotsuke Aoshima, Yuichi Akagi, Irmina Diala  
Department of Biological & Environmental Chemistry, School of Humanity Oriented Science and Technology, Kinki University, Fukuoka, Japan
- P2-382** Controlled Intracellular Delivery and Antisense Inhibition of DNA-Peptide Conjugates  
Masayuki Fujii, Irmina Diala  
Department of Biological & Environmental Chemistry, School of Humanity Oriented Science and Technology, Kinki University, Fukuoka, Japan
- P2-383** Specific inhibition of human telomerase activity by siRNA and phosphorothioate oligonucleotide-peptide conjugates  
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- P2-384** New method for photocontrol of peptide function: light-regulation of matrix-metalloproteinase-3 inhibitory peptide  
Yuka Noro, Naoki Umezawa, Kazuhiro Ukai, Nobuki Kato, Tsunehiko Higuchi  
Graduate School of Pharmaceutical Sciences, Nagoya City University, Nagoya, Japan

**P2-385**    **Molecular evolution of a peptide GPCR ligand driven by artificial neural networks**

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