

## Plenary Lecture

September 10 (Mon) 17:20 - 18:10 Room A (4F)

Chair: Hiroaki Nagaoka (Fac. Pharmaceut. Sci., Nagasaki International Univ.)

### ***PL-1* Trace-determination of abuse drugs in biomaterials**

○ Kenichiro Nakashima

(Fac. Pharmaceut. Sci., Nagasaki International Univ.)

## Educational Lecture

September 11 (Tue) 13:30 - 14:00 Room A (4F)

Chair: Yukiko Ogawa (Fac. Pharmaceut. Sci., Nagasaki International Univ.)

### ***EL-1* Neurologic intractable disease “HTLV-1-associated myelopathy (HAM)” — Nagasaki is the endemic area of HAM —**

○ Tatsufumi Nakamura

(Fac. Hum. & Soc. Stud., Nagasaki International Univ.)

## Award Lectures

### Scientific Award

September 11 (Tue) 11:20 - 11:50 Room A (4F)

Chair: Kiyoshi Nagata (Fac. Pharmaceut. Sci., Tohoku Med. Pharm. Univ.)

### ***AL1* Study on the response to endo- and exo- environments and modulation of drug metabolizing enzymes**

○ Yuji Ishii

(Graduate School of Pharmaceutical Sciences, Kyushu University)

## Kanehara Award

September 11 (Tue) 11:50 - 12:10 Room A (4F)

Chair: Masahiko Satoh (Fac. Pharmaceut. Sci., Aichi Gakuin Univ.)

### ***AL2-1* Involvement of ubiquitin-related genes for cadmium toxicity**

○ Maki Tokumoto

(Sch. of Pharm., Aichi Gakuin Univ.)

September 11 (Tue) 12:10 - 12:30 Room A (4F)

Chair: Yoshitomo Suhara (Dept. of Biosci. and Eng., Shibaura Inst. Technol.)

***AL2-2*    Novel physiological roles of vitamin K in the brain**

○ Yoshihisa Hirota<sup>1</sup>

(<sup>1</sup>Dept. of Biosci. and Eng., Shibaura Inst. Technol.)

## **Invited Lecture**

September 10 (Mon) 11:00 - 11:30 Room A (4F)

Chair: Seiichiro Himeno (Fac. Pharmaceut. Sci., Tokushima Bunri Univ.)

***IL-1*      Chemical-induced Abnormal Amino Acid and Lipid Metabolism Contribute to the Development of Fatty Liver Disease**

○ Byung-Hoon Lee

(College of Pharmacy, Seoul National University)

September 11 (Tue) 10:50 - 11:20 Room A (4F)

Chair: Morio Nakayama (Grad. Sch. Biomedical Sci., Nagasaki Univ.)

***IL-2*      Minamata disease and methylmercury**

○ Akira Naganuma

(Tohoku Univ.)

## **2018 Japan/Korea Joint Symposium on Pharmaceutical Health Science and Environmental Toxicology**

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September 10 (Mon) 11:30 - 12:30 Room A (4F)

Chair: Sung Hwan Ki (Chosun Univ., Korea)

Jin-Yong Lee (Aichi Gakuin Univ., Japan)

**S-1 ZIP8 mutations and manganese metabolic disorder**

○ Hitomi Fujishiro, Seiichiro Himeno  
(Fac. Pharmaceut. Sci., Tokushima Bunri Univ.)

**S-2 Analysis of epigenetic modifications by methylmercury exposure in neuronal differentiation model**

○ Hisaka Kurita, Suzuna Go, Kana Matsumoto, Manami Hatano,  
Masatoshi Inden, Isao Hozumi  
(Laboratory of Medical Therapeutics and Molecular Therapeutics, Gifu Pharmaceutical University, JAPAN)

**S-3 Pre-dose transcriptomics to identify biomarkers for susceptibility to drug-induced hepatotoxicity**

○ Kyung-Min Lim Ph.D  
(College of Pharmacy, Ewha Womans University, Seoul, Republic of Korea)

**S-4 Drug repositioning approach to identify NRF2 inhibitors for cancer therapy: Clobetasol propionate and beyond**

○ Sang-Min Jeon, Ph.D.  
(College of Pharmacy and Research Institute of Pharmaceutical Science and Technology, Ajou University, Suwon, Gyeonggi-do 16499, Republic of Korea)

## **2018 Japan/Korea Joint Symposium on Pharmaceutical Health Science and Environmental Toxicology : Poster Session**

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Discussions: September 10 (Mon) 13:50 - 14:35 Room C (1F)

**PS-1 A mechanism involved in the induction of oncostatin M expression by methylmercury**

○ Wei Yi Huang, Takashi Toyama, Takayuki Hoshi, Akira Naganuma, Gi-Wook Hwang  
(Grad. Sch. Pharmaceut. Sci., Tohoku Univ.)

- PS-2 Evaluation of heavy metals in clinical samples by laser ablation (LA)-ICP-MS**  
 ○ Makiko Iwase<sup>1</sup>, Noriyuki Suzuki<sup>1</sup>, Yu-ki Tanaka<sup>1</sup>, Hiroko Abe<sup>2</sup>, Akifumi Eguchi<sup>3</sup>, Hirofuro Iwase<sup>2,4</sup>, Chisato Mori<sup>3</sup>, and Yasumitsu Ogra<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Pharm. Sci., Chiba Univ., <sup>2</sup>Edu. Res. Center Legal Med., Chiba Univ., <sup>3</sup>Center Prev. Med. Sci., Chiba Univ., <sup>4</sup>Grad. Sch. Med., Univ. Tokyo.)
- PS-3 Characterization of NAFLD-induced cytochrome P450 modulation by comparative toxicoproteomics**  
 ○ Ann-Yae Na<sup>1</sup>, Ok Kwang Kwon<sup>1</sup>, Riya Shrestha<sup>1</sup>, Piljung Jo<sup>1</sup>, Kyu Min Kim<sup>2</sup>, Sung Hwan Ki<sup>2</sup>, Sangkyu Lee<sup>1</sup> (<sup>1</sup>BK21 Plus KNU Multi-Omics based Creative Drug Research Team, College of Pharmacy, Kyungpook National University, Daegu, Republic of Korea, <sup>2</sup>College of Pharmacy, Chosun University, Gwangju, Republic of Korea)
- PS-4 A novel mechanism involved in the induction of TNF- $\alpha$  expression by methylmercury**  
 ○ Chika Kaneko, Takashi Toyama, Akira Naganuma, Gi-Wook Hwang (Grad. Sch. Pharmaceut. Sci., Tohoku Univ.)
- PS-5 Elevation of the anandamide and 2-arachidonoylglycerol in mouse brain by synthetic cannabinoid JWH-018: the mechanism of recognition memory impairment**  
 ○ Ren-Shi Li<sup>1</sup>, Ryo Fukumori<sup>2</sup>, Tomoki Takeda<sup>1,5</sup>, Satoshi Morimoto<sup>1</sup>, Kazuhito Watanabe<sup>3</sup>, Kosuke Aritake<sup>3</sup>, Taku Yamaguchi<sup>2</sup>, Ruri Kikura-Hanajiri<sup>4</sup>, Yoshitaka Tanaka<sup>1</sup>, Tsuneyuki Yamamoto<sup>2</sup>, Yuji Ishii<sup>1</sup> (<sup>1</sup>Grad Sch Pharmaceut Sci, Kyushu Univ., <sup>2</sup>Fac Pharmaceut Sci, Nagasaki International Univ., <sup>3</sup>Daiichi Univ of Pharmacy, <sup>4</sup>NIHS, <sup>5</sup>Japan Bioassay Research Center)
- PS-6 Methylmercury induced neuronal cell death via M1-microglia activation**  
 ○ Takayuki Hoshi, Takashi Toyama, Akira Naganuma, Gi-Wook Hwang (Grad. Sch. Pharmaceut. Sci., Tohoku Univ.)
- PS-7 Polyhexamethylene guanidine phosphate induced G1/S arrest and apoptosis through ROS/ATM/p53 pathway**  
 ○ In Jae Bang<sup>1</sup>, Mi Ho Jung<sup>1</sup>, Yong Joo Park<sup>1</sup>, Ha Ryong Kim<sup>2</sup> (<sup>1</sup>School of Pharmacy, Sungkyunkwan University, <sup>2</sup>College of Pharmacy, Catholic University of Daegu)
- PS-8 Enhancement of hippocampal Zn<sup>2+</sup> toxicity via amyloid  $\beta_{1-42}$  along with aging and its defense strategy**  
 ○ Hiroki Suzuki, Shuhei Kobuchi, Wakana Hashimoto, Haruna Tamano, Atsushi Takeda (Grad. Sch. Pharm. Sci., Univ. Shizuoka)

- PS-9 Metabolism of selenocompounds in the gastrointestinal tract and their nutritional availabilities**  
 ○ Kazuaki Takahashi<sup>1</sup>, Noriyuki Suzuki<sup>1</sup>, Yasumitsu Ogra<sup>1</sup> (<sup>1</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)
- PS-10 *Astilbe rubra* suppresses TGF-β1-induced epithelial mesenchymal transition via inhibition of Smad/snail pathway**  
 ○ In Jae Bang<sup>1</sup>, Ha Ryong Kim<sup>2</sup>, Kyu Hyuck Chung<sup>1</sup> (<sup>1</sup>School of Pharmacy, Sungkyunkwan University, <sup>2</sup>College of Pharmacy, Catholic University of Daegu)
- PS-11 Titanium dioxide nanoparticles-induced testicular dysfunction is mediated by anatase titanium dioxide**  
 ○ Hiroki Yoshioka<sup>1</sup>, Katsumi Ohtani<sup>2</sup>, Nobuhiko Miura<sup>2</sup> (<sup>1</sup>College of Pharmacy, Kinjo Gakuin University, <sup>2</sup>National Institute of Occupational Safety and Health)
- PS-12 A novel function of metallothionein-3: Inactivation of methylmercury by the protein-bound sulfane sulfur**  
 ○ Yunjie Ding<sup>1</sup>, Yasuhiro Shinkai<sup>1,2</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Comprehensive Human Sci., Univ. of Tsukuba, <sup>2</sup>Fac. of Med., Univ. of Tsukuba)
- PS-13 Damage of rat dorsal root ganglion neurons by methylmercury through activation of the TNF signaling**  
 ○ Eiko Yoshida<sup>1</sup>, Yu Sasaki<sup>1</sup>, Yo Shinoda<sup>2</sup>, Satoshi Tatsumi<sup>2</sup>, Yasuyuki Fujiwara<sup>2</sup>, Toshiyuki Kaji<sup>1</sup> (<sup>1</sup>Fac. of Pharm. Sci., Tokyo Univ. of Sci., <sup>2</sup>Sch. Pharm., Tokyo Univ. Pharm. & Life Sci.)
- PS-14 The pattern profiling of exosomal miRNAs derived from injured bronchial epithelial cell by PHMG-phosphate**  
 ○ Mi Ho Jeong<sup>1</sup>, Ha Ryong Kim<sup>2</sup>, Kyu Hyuck Chung<sup>1</sup> (<sup>1</sup>School of Pharmacy, Sungkyunkwan University, <sup>2</sup>College of Pharmacy, Catholic University of Daegu)
- PS-15 Role of the C-terminal transmembrane and cytoplasmic domains of UDP-glucuronosyltransferase 1A9 in ER localization and oligomerization**  
 ○ Yuu Miyauchi<sup>1</sup>, Ken Kurohara<sup>1</sup>, Akane Kimura<sup>1</sup>, Keiko Fujimoto<sup>1</sup>, Yuko Hirota<sup>1</sup>, Peter I. Mackenzie<sup>2</sup>, Yuji Ishii<sup>3</sup>, Yoshitaka Tanaka<sup>1</sup> (<sup>1</sup>Div Pharmaceut Cell Biol, Grad Sch Pharmaceut Sci, Kyushu Univ, <sup>2</sup>Dept Clin Pharmacol, Flinders Univ, <sup>3</sup>Lab Mol Life Sci, Grad Sch Pharmaceut Sci, Kyushu Univ)
- PS-16 Modification of histone H3K9 in 3T3-L1 adipocyte differentiated by tetrabromobisphenol A**  
 ○ Shoko Ogushi<sup>1</sup>, Osamu Aozasa<sup>1</sup>, Yoshinori Iba<sup>1</sup>, Ema Akiyama<sup>2</sup>, Hideki Kakutani<sup>2</sup>, Souichi Ohta<sup>2</sup>, Tomoki Kimura<sup>1</sup> (<sup>1</sup>Department of Life Sciences, Faculty of Sciences and Engineering, Setsunan University, <sup>2</sup>Faculty of Pharmaceutical Sciences, Setsunan University)

- PS-17 Comparative proteomics of Zebrafish liver in 5 POPs mixture exposure**  
 ○ Yan Gao<sup>1</sup>, Oh Kwang Kwon<sup>1</sup>, Ann Yae Na<sup>1</sup>, Do Eun Kim<sup>1</sup>, Ki-Tae Kim<sup>2</sup>, Sangkyu Lee<sup>1</sup> (<sup>1</sup>BK21 Plus KNU Multi-Omics based Creative Drug Research Team, College of Pharmacy, Kyungpook National University, Daegu, Republic of Korea, <sup>2</sup>Department of Environmental Engineering, Seoul National University of Science and Technology, Seoul, Republic of Korea)
- PS-18 Elucidation of the mechanism by which Gefitinib induces IL-1 $\beta$ -mediated inflammation**  
 ○ Rio Naganuma, Yuki Kudoh, Yusuke Hirata, Takuya Noguchi and Atsushi Matsuzawa (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- PS-19 Nuclear-translocated SQSTM1/p62-based aggresome-like induced structures (ALIS) act as microdomains sensing cellular stresses and triggering oxidative stress-induced parthanatos**  
 ○ Midori Suzuki, Yusuke Hirata, Takuya Noguchi and Atsushi Matsuzawa (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- PS-20 Identification of novel biomarkers for nephrotoxicity induced by long-term exposure of low-dose heavy metals of Hg and Cd in rats**  
 ○ Young-Jun Shin<sup>1</sup>, Haram Kim<sup>1</sup>, Eun-Hye Kim<sup>1</sup>, Donggeun Shin<sup>1</sup>, Donghyun Kim<sup>1</sup>, Hyung-Sik Kim<sup>2</sup>, Ok-Nam Bae<sup>1</sup> (<sup>1</sup>College of Pharmacy Institute of Pharmaceutical Science and Technology, Hanyang University, <sup>2</sup>College of Pharmacy, Sungkyunkwan University.)
- PS-21 Biotransformation of methylmercury in mice: An examination with the metabolite produced by interaction with reactive sulfur species**  
 ○ Yusuke Katayama<sup>1</sup>, Yumi Abiko<sup>1,2</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Comp. Human Sci., Univ. Tsukuba, <sup>2</sup>Fac. Med., Univ. Tsukuba)
- PS-22 Potential skin sensitization of Brazilian green propolis evaluated by using test guidelines.**  
 ○ Erina Shiraishi<sup>1</sup>, Akiko Ido<sup>1</sup>, Hisamitsu Nagase<sup>1,2</sup>, Tsuyoshi Nakanishi<sup>1</sup> (<sup>1</sup>Gifu Pharm. Univ., <sup>2</sup>Gifu Univ. of Med Sci.)
- PS-23 Persulfide as a protection factor to block peroxidation of protein cysteine residue**  
 ○ Nho Cong Luong<sup>1</sup>, Yumi Abiko<sup>1,2</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Comp. Human Sci., Univ. Tsukuba, <sup>2</sup>Fac. Med., Univ. Tsukuba)

## **Forum I: The forefront of reproductive toxicology**

September 10 (Mon) 9:10 - 10:50 Room A (4F)

Organizer / Chair: Seiichi Yoshida (Oita Univ. Nurs Health Sci)

Hiromitsu Tanaka (Fac. Pharmaceut. Sci., Nagasaki International Univ.)

***F1-1* Health impact assessment of chemical exposure using spermatogenic potential**

○ Shigeru Oshio (Ohu University School of Pharmaceutical Sciences)

***F1-2* Testicular dysfunction in occupational health**

○ Nobuhiko Miura (Natl Inst Occu Safety Health)

***F1-3* Organ culture of testis tissue and its possible application to a toxicological test**

○ Takehiko Ogawa (Medical Life Science, Yokohama City Univ.)

## **Forum II: Publication memory forum of "the testing methods on school environmental health for school pharmacist" Pharmaceutical health sciences support school pharmacist activity**

September 10 (Mon) 15:30 - 17:10 Room A (4F)

Organizer / Chair: Hisamitsu Nagase (Sch. of Health Sci., Gifu Univ. of Med. Sci.)

Yasuyuki Fujiwara (Sch. of Pharm., Tokyo Univ. Pharm. & Life Sci.)

***F2-1* Revised “School environmental health standard” and “the testing methods on school environmental health for school pharmacist”**

○ Hisamitsu Nagase (School of Health Sci., Gifu Univ. of Medical Sci.)

***F2-2* Education for prevention of drug abuse unique to pharmacists at elementary, junior high and senior high schools**

○ Kunihiro Kitagaki (Social Pharmacy Lab., Tokyo University of Pharmacy and Life Sciences)

***F2-3* Anti-Doping Education and School Pharmacist**

○ Maho Taguchi (Yokohama University of Pharmacy)

***F2-4* School pharmacist activities at the Kumamoto earthquake (School pharmacist's response and tasks in case of disaster)**

○ Koji Tominaga (Managing Director, Kumamoto Pharmaceutical Association)

## **Forum III: Up-to-date: Accumulation and health effects of dietary heavy metals in humans**

September 11 (Tue) 9:10 - 10:50 Room A (4F)

Organizer / Chair: Seiichiro Himeno (Fac. Pharmaceut. Sci., Tokushima Bunri Univ.)

Yasumitsu Ogra (Grad. Sch. Pharm. Sci., Chiba Univ.)

**F3-1     Arsenic as a vascular toxin – The effects of arsenic pollution on hypertension and atherosclerosis in Bangladesh**

○ Seiichiro Himeno<sup>1</sup>, Khaled Hossain<sup>2</sup> (<sup>1</sup>Fac. Pharmaceut. Sci., Tokushima Bunri Univ., <sup>2</sup>Dept. Biochem. Mol. Biol., Rajshahi Univ.)

**F3-2     Current status of health effects on rice farmers and concentrations of cadmium and arsenic in rice in cadmium-polluted areas under the prosecution of flooding of paddy fields in Akita prefecture**

○ Hyogo Horiguchi (Dep. Hygiene, Kitasato Univ. School of Medicine)

**F3-3     Toxic and trace elements profiles of maternal blood, umbilical cord blood, and placenta in Japan.**

○ Miyuki Iwai-Shimada<sup>1</sup>, Nozomi Tatsuta<sup>2</sup>, Kunihiro Nakai<sup>2</sup> and Hiroshi Satoh<sup>2</sup>  
(<sup>1</sup>National Institute for Environmental Studies, <sup>2</sup>Tohoku Univ. Grad. School of Med.)

**F3-4     Differences in the nutritional value and the toxicity among naturally occurring selenocompounds**

○ Yasumitsu Ogra (Grad. Sch. Pharm. Sci., Chiba Univ.)

## **Forum IV: Recent hot topics on infectious diseases**

September 11 (Tue) 14:00 - 15:40 Room A (4F)

Organizer / Chair: Shusuke Kuge (Fac. Pharmaceut. Sci., Tohoku Med. Pharm. Univ.)

Atsushi Matsuzawa (Fac. Pharmaceut. Sci., Tohoku Univ.)

**F4-1     Development of medicines for infectious diseases – Malaria case -**

○ Kiyoshi Kita (Graduate School of Tropical Medicine and Global Health, Nagasaki Univ.)

**F4-2     Emerging and re-emerging virus infections in Japan: Dengue fever, Zika virus disease, and SFTS**

○ Masayuki Saijo (Department of Virology 1, National Institute of Infectious Diseases)

***F4-3* National Surveillance of Category V Infectious Diseases and Control Measures including Vaccination Program**

○ Kazunori Oishi (Infectious Disease Surveillance Center, National Institute of Infectious Disease)

***F4-4* Anti-HIV Drug Discovery and Development**

○ Shogo Misumi (Faculty of Life Sciences, Kumamoto University)

## Award Candidates Presentation

### Candidates for Young Investigator Award

September 10 (Mon) 9:10 - 10:02 Room B (3F)

Chair: Hiroaki Nagaoka (Fac. Pharmaceut. Sci., Nagasaki International Univ.)

- P-018    Enhancement of hippocampal  $\text{Zn}^{2+}$  toxicity via amyloid  $\beta_{1-42}$  along with aging and its defense strategy**  
○ Hiroki Suzuki, Shuhei Kobuchi, Wakana Hashimoto, Haruna Tamano, Atsushi Takeda (Grad. Sch. Pharm. Sci., Univ. Shizuoka)
- P-026    Metabolism of selenocompounds in the gastrointestinal tract and their nutritional availabilities**  
○ Kazuaki Takahashi<sup>1</sup>, Noriyuki Suzuki<sup>1</sup>, Yasumitsu Ogra<sup>1</sup> (<sup>1</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)
- P-036    Methylmercury induced neuronal cell death via M1-microglia activation**  
○ Takayuki Hoshi, Takashi Toyama, Akira Naganuma, Gi-Wook Hwang (Graduate School of Pharmaceutical Sciences, Tohoku University)
- P-038    A novel function of metallothionein-3: Inactivation of methylmercury by the protein-bound sulfane sulfur**  
○ Yunjie Ding<sup>1</sup>, Yasuhiro Shinkai<sup>1,2</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Comprehensive Human Sci., Univ. of Tsukuba, <sup>2</sup>Fac. of Med., Univ. of Tsukuba)
- P-043    Suppression mechanisms of the fibrinolytic activity by sodium arsenite in cultured human vascular endothelial EA.hy926 cells**  
○ Tsuyoshi Nakano<sup>1</sup>, Tsutomu Takahashi<sup>1</sup>, Go Kato<sup>1</sup>, Yayoi Tsuneoka<sup>1</sup>, Yo Shinoda<sup>1</sup>, Chika Yamamoto<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Yasuyuki Fujiwara<sup>1</sup> (<sup>1</sup>Sch. of Pharm., Tokyo Univ. of Pharm. & Life Sci., <sup>2</sup>Fac. of Pharm. Sci., Toho Univ., <sup>3</sup>Fac. of Pharm. Sci., Tokyo Univ. of Sci.,)
- P-050    Lipo-3 is a key cell death effector of a GPx4 depleted novel lipid peroxidation dependent cell death, Lipoxytosis, and not a ferroptosis effector.**  
○ Kahori Oka<sup>1,2</sup>, Moe Nagahisa<sup>1</sup>, Rie Fukuda<sup>1</sup>, Masaki Matsuoka<sup>1,2</sup>, Hirotaka Imai<sup>1,2</sup> (<sup>1</sup>Sch. Pharmaceut. Sci., Kitasato Univ., <sup>2</sup>AMED-CREST)
- P-070    Roles of the multifunctional protein p62/SQSTM1 in oxidative stress-induced parthanatos**  
○ Midori Suzuki, Yusuke Hirata, Takuya Noguchi, Atsushi Matsuzawa (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

***P-079* Contribution of aryl hydrocarbon receptor (AHR) to the brain sexual differentiation and gonadal development in puberty.**

○ Haruki Fukumitsu<sup>1</sup>, Tomoki Takeda<sup>1,2</sup>, Yukiko Hattori<sup>1</sup>, Arisa Nakamura<sup>1</sup>, Kyoko Nishida<sup>1</sup>, Yoshitaka Tanaka<sup>1</sup>, Yuji Ishii<sup>1</sup> (<sup>1</sup>Grad. Sch. Pharmaceut. Sci., Kyushu Univ., <sup>2</sup>Japan Bioassay Research Center)

## Award Candidates Presentation

### Candidates for Rookies of the Year Award

September 10 (Mon) 10:02 - 10:50 Room B (3F)

Chair: Tomoki Kimura (Fac. Sci. Eng., Setsunan Univ.)

**P-010**     **Changes in the expression level of enzymes related to *S*-adenosylmethionine (SAM) in fetal hypothalamus by maternal exposure to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD)**

○ Hiroe Sano<sup>1</sup>, Ren-Shi Li<sup>2</sup>, Yuki Matsuo<sup>2</sup>, Takeshi Matsushita<sup>1</sup>, Hong-Bin Chen<sup>2</sup>, Takayuki Koga<sup>3</sup>, Tomoki Takeda<sup>2,4</sup>, Yoshitaka Tanaka<sup>2</sup>, Yuji Ishii<sup>2</sup> (<sup>1</sup>Fac Pharmaceut Sci., Kyushu Univ., <sup>2</sup>Grad Sch Pharmaceut Sci., Kyushu Univ., <sup>3</sup>Daiichi University of Pharmacy, <sup>4</sup>Japan Bioassay Research Center)

**P-015**     **Characterization of peroxisome proliferator activated receptor (PPAR) in cartilage fish *Leucoraja erinacea***

○ Youichirou Ishii<sup>1</sup>, Youhei Hiromori<sup>1,2</sup>, Takayuki Miyagi<sup>1</sup>, Hisamitsu Nagase<sup>1,3</sup>, L. Filipe C. Castro<sup>4</sup>, Tsuyoshi Nakanishi<sup>1</sup> (<sup>1</sup>Gifu Pharmaceutical Univ., <sup>2</sup>College of Pharm, Suzuka medical science Univ., <sup>3</sup>Gifu Univ. of Medical Science, <sup>4</sup>CIIMAR, University of Porto)

**P-025**     **Structure-activity relationships for zinc phenanthroline complexes in the proliferation of vascular endothelial and smooth muscle cells**

○ Mitsuhiro Mori<sup>1</sup>, Tomoya Fujie<sup>1</sup>, Takato Hara<sup>1</sup>, Takehiro Nakamura<sup>2</sup>, Naohito Kawasaki<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Chika Yamamoto<sup>1</sup> (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Fac. Pharm. Sci., Kindai Univ., <sup>3</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)

**P-032**     **Induction of ZIP13, a zinc transporter, by overexpression of FGF-2 in vascular endothelial cells**

○ Chihiro Miyauchi, Eiko Yoshida, Toshiyuki Kaji (Faculty of Pharmaceutical Sciences, Tokyo University of Science)

**P-039**     **The role of TNF receptor 3 in neuronal damage induced by methyl mercury in mouse brain**

○ Yohei Tsunoda, Takashi Toyama, Takayuki Hoshi, Akira Naganuma, Gi-Wook Hwang (Grad. Sch. Pharmaceut. Sci., Tohoku Univ.)

**P-072**     **Elucidation of the mechanism by which Gefitinib induces IL-1 $\beta$ -mediated inflammation**

○ Rio Naganuma, Yuki Kudoh, Yusuke Hirata, Takuya Noguchi, Atsushi Matsuzawa (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

- P-078***    **Impact analysis of C8 $\gamma$ -deficiency on glucose and lipid metabolism**  
○ Katsuya Yamamoto, Iori Tsubakihara, Aoki Akira, Hisamitsu Nagase,  
Tsuyoshi Nakanishi (Gifu Pharm. Univ.)

## Oral Session 1

### Biochemistry

September 10 (Mon) 15:30 - 16:18 Room B (3F)

Chair: Tsuyoshi Nakanishi (Gifu Pharm. Univ.)

Yoshihito Nakatani (Sch. Pharm., Showa Univ.)

**01-1 Effects of statins on the inflammatory response of macrophages activated through TLR3**

○ Atsushi Koike<sup>1</sup>, Kaito Tsujinaka<sup>2</sup>, Fumio Amano<sup>2</sup> and Ko Fujimori<sup>1</sup> (<sup>1</sup>Dept. Pathobiochem., Osaka. Univ. Pharm. Sci., <sup>2</sup>Osaka. Univ. Pharm. Sci.)

**01-2 Effect on neuronal development by knockout of ketone body-utilizing enzyme**

○ Shinya Hasegawa, Masahiro Yamasaki, Masahiko Imai, Tetsuya Fukui, Noriko Takahashi (Lab. Health Chem., Hoshi Univ.)

**01-3 Regulation of *Fsp27b* gene expression by PPAR $\gamma$  in the liver of *ob/ob* mice.**

○ Daisuke Aibara<sup>1</sup>, Kimihiko Matsusue<sup>1</sup>, Soichi Takiguchi<sup>2</sup>, Shigeru Yamano<sup>1</sup> (<sup>1</sup>Faculty of Pharmaceutical Science, Fukuoka University, <sup>2</sup>Institute for Clinical Research, National Kyushu Cancer Center)

**01-4 Impact analysis of anti-androgenic agent on female reproductive functions of 46,XX DSD(disorders of sex development) model mice**

○ Keisuke Ito<sup>1</sup>, Kyoko Mekada<sup>1</sup>, Yasushi Nishioka<sup>1</sup>, Hisamitsu Nagase<sup>1,2</sup>, Tsuyoshi Nakanishi<sup>1</sup> (<sup>1</sup>Gifu Pharm. Univ., <sup>2</sup>Gifu Univ. of Med. Sci.)

## Oral Session 2

### Endocrine Disruptors, Cellular Responses

September 10 (Mon) 16:20 - 17:08 Room B (3F)

Chair: Kouichi Yoshinari (Sch. of Pharm. Sci., Univ. of Shizuoka)

Kenji Kurokawa (Fac. Pharmaceut. Sci., Nagasaki International Univ.)

**02-1 Effect of dihydropyrazine on TLR4 mediated NF $\kappa$ B and MAPK pathway**

○ Madoka Esaki<sup>1</sup>, Takumi Ishida<sup>1</sup>, Shinji Takechi<sup>1</sup>, Shunji Itoh<sup>2</sup>, Masaki Yoshida<sup>3</sup> (<sup>1</sup>Div. Pharmaceut. Sci., Sojo Univ., <sup>2</sup>Dept. Health Sci., Grad. Sch. Health Sci., Kansai Univ. Health Sci., <sup>3</sup>Fac. Bio-Sci., Nagahama Inst. Bio-Sci. Technol.)

**02-2 Uncovering of axon elongation in peripheral tissue during pregnancy**

○ Hirofumi Hohjoh<sup>1</sup>, Saya Hokazono<sup>1</sup>, Junsuke Hirono<sup>1</sup>, Eri Segi-Nishida<sup>2</sup>, Kimie Nakagawa<sup>1</sup>, Hiroshi Hasegawa<sup>1</sup> (<sup>1</sup>Kobe Pharmaceut. Univ., <sup>2</sup>Facul. Indust. Sci. and Tech., Tokyo Univ. of Sci.)

**O2-3 Fatty acid 2-hydroxylase (FA2H) positively modulates migration of human breast cancer cells**

○ Masayo Hirao-Suzuki<sup>1</sup>, Shuso Takeda<sup>1</sup>, Kazuhito Watanabe<sup>2</sup>, Hironori Aramaki<sup>2</sup>, Masufumi Takiguchi<sup>1</sup> (<sup>1</sup>Fac. Pharm. Sci., Hiroshima Intl. Univ., <sup>2</sup> Daiichi Univ. Pharm.)

**O2-4 Elucidation of the molecular mechanisms underlying the trans-fatty acid-mediated promotion of DNA damage responses**

○ Yusuke Hirata, Miki Takahashi, Saki Suzuki, Ryosuke Matsui, Takuya Noguchi, and Atsushi Matsuzawa. (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

## **Oral Session 3**

### **Drug Metabolism, Oxidative Stress, Others**

September 11 (Tue) 9:30 - 10:30 Room B (3F)

Chair: Kazuhiko Takahashi (Yokohama Univ. of Pharmacy)

Akinori Sugiyama (Sch. of Pharm., Iwate Med. Univ.)

**O3-1 Role of the C-terminal transmembrane and cytoplasmic domains of UDP-glucuronosyltransferase 1A9 in ER localization and oligomerization**

○ Yuu Miyauchi<sup>1</sup>, Ken Kurohara<sup>1</sup>, Akane Kimura<sup>1</sup>, Keiko Fujimoto<sup>1</sup>, Yuko Hirota<sup>1</sup>, Peter Mackenzie<sup>2</sup>, Yuji Ishii<sup>3</sup>, Yoshitaka Tanaka<sup>1</sup> (<sup>1</sup>Grad Sch Pharmaceut Sci, Kyushu Univ, Div Pharmaceut Cell Biol, <sup>2</sup>Flinders Univ, Dept Clin Pharmacol, <sup>3</sup>Grad Sch Pharmaceut Sci, Kyushu Univ, Lab Mol Life Sci)

**O3-2 Investigation of importance of membrane localization in suppression of GPx4 depletion-induced novel cell death by SMS2 overexpression**

○ Takeshi Kumagai<sup>1,2</sup>, Seira Hirasawa<sup>1,2</sup>, Ririka Oya<sup>1,2</sup>, Miyu Kawai<sup>1</sup>, Hirotaka Imai<sup>1,2</sup> (<sup>1</sup>Sch. of Pharm. Sci., Kitasato Univ., <sup>2</sup>AMED-CREST)

**O3-3 Investigation of oxidative stress in the mouse exposed to intermediate frequency magnetic field**

○ Kenji Hattori<sup>1</sup>, Hiroko Iwanami<sup>1</sup>, Shin Ohtani<sup>1</sup>, Machiko Maeda<sup>1</sup>, Akira Ushiyama<sup>2</sup>, Naoki Kunugita<sup>2</sup>, Keiji Wada<sup>3</sup>, Yukihisa Suzuki<sup>3</sup>, Kazuyuki Ishii<sup>1</sup> (<sup>1</sup>Meiji Pharmaceut. Univ., <sup>2</sup>National Institute of Public Health, <sup>3</sup>Grad. Sch. System Design. Tokyo Metolopolitan Univ.)

**O3-4 Inhibition of vascular endothelial growth factor (VEGF)-induced angiogenic effects in human umbilical endothelial cells (HUVECs) by cinnamon extract**

○ Toshihiro Sakurai<sup>1</sup>, Naohiro Ooshima<sup>1</sup>, Sakura Yoshida<sup>1</sup>, Noriyasu Hada<sup>1</sup>, Gaku Ichihara<sup>1</sup> (Faculty of Pharmaceutical Science, Tokyo University of Science,)

- 03-5 Establishment of a novel intrauterine hypo-perfusion model, of which blood flow in uterus are gradually and continuously suppressed, for reproductive and developmental toxicology**  
○ Atsuto ONODA<sup>1,2</sup>, Yuma KITASE<sup>1</sup>, Masahiro TSUJI<sup>3,4</sup>, Masahiro HAYAKAWA<sup>1</sup>, Yoshiaki SATO<sup>1</sup> (<sup>1</sup>Cent. Maternal-Neonat. Care, Nagoya Univ. Hosp., <sup>2</sup>JSPS-PD, <sup>3</sup>Dep. Regene. Med. Tis. Eng., Natio. Cere. Cardio. Cent. Res. In., <sup>4</sup>Fac. Home Econ., Kyoto Women's Univ.)

## Oral Session 4

### Neural Toxicity

September 11 (Tue) 14:05 - 14:53 Room B (3F)

Chair: Yaichiro Kotake (Fac. of Pharm. Sci., Hiroshima Univ.)

Hideto Jinno (Fac. Pharmaceut. Sci., Meijo Univ.)

- 04-1 Adrenergic  $\beta$  receptor activation via intracellular  $Zn^{2+}$  signaling in the amygdala rescues amyloid  $\beta$ -induced cognitive decline**  
○ Haruna Tamano, Mitsuyasu Kubota, Ryota Shimaya, Yuki Fujise, Miki Suzuki, Atsushi Takeda (Dep. Neurophysiology, Sch. Pharm. Sci., Univ. Shizuoka)
- 04-2 Role of microglial activation and neuroinflammation in neurotoxicity of acrylamide, an environmental soft electrophile**  
○ Cai Zong<sup>1</sup>, Rieka Hasegawa<sup>1</sup>, Makoto Urushitani<sup>2</sup>, Toshihiro Sakurai<sup>1</sup>, Seiichiro Ohsako<sup>3</sup>, Gaku Ichihara<sup>1</sup> (<sup>1</sup>Occup. Environ. Health, Fac. of Pharm. Sci., Tokyo Univ. of Sci.; <sup>2</sup>Mol. Neuroscience Research Center, Shiga Univ. of Med. Sci.; <sup>3</sup>Grad. Sch. Med., Univ. of Tokyo)
- 04-3 The study of MeHg-induced sensory neuropathy using rat dorsal root ganglion**  
○ Yo Shinoda<sup>1</sup>, Shunsuke Ehara<sup>1</sup>, Satoshi Tatsumi<sup>1</sup>, Momoko Sakamoto<sup>1</sup>, Tatsuro Amemiya<sup>1</sup>, Tsutomu Takahashi<sup>1</sup>, Yayoi Tsuneoka<sup>1</sup>, Eiko Yoshida<sup>2</sup>, Toshiyuki Kaji<sup>2</sup>, Yasuyuki Fujiwara<sup>1</sup> (<sup>1</sup>Sch. of Pharm., Tokyo Univ. of Pharm. and Life Sci., <sup>2</sup>Fac. of Pharm. Sci., Tokyo Univ. of Sci.)
- 04-4 Effect of methyl mercury on phospholipid metabolism in mouse brain.**  
○ Emiko Yoda, Shiori Koda, Shuntaro Hara (Sch. of Pharmacy, Showa Univ.)

## Oral Session 5

### Metals, Preventive Pharmacology, Environmental Pollutants

September 11 (Tue) 14:53 - 15:41 Room B (3F)

Chair: Chika Yamamoto (Fac. Pharmaceut. Sci., Toho Univ.)

Ken Tachibana (Fac. Pharmaceut. Sci., Sanyo-Onoda City University)

**O5-1     *In vitro* assessment of selenium in Asari clam for nutritional benefits**

○ Miho Iwataka<sup>1</sup>, Sakura Yoshida<sup>1</sup>, Takeshi Fuchigami<sup>1</sup>, Mamoru Haratake<sup>2</sup>,  
Morio Nakayama<sup>1</sup> (<sup>1</sup>Graduate School of Biomedical Sciences, Nagasaki University,  
<sup>2</sup>Faculty of Pharmaceutical Sciences, Sojo University)

**O5-2     Chemical structures and antimutagenic effects of onoceranoid-type triterpenoids  
from leaves of *Lansium domesticum***

○ Takahiro Matsumoto<sup>1</sup>, Takahiro Kitagawa<sup>1</sup>, Stephen Teo<sup>2</sup>, Yuuka Anai<sup>1</sup>,  
Daisuke Imahori<sup>1</sup>, Haji Sapuan bin Ahmad<sup>2</sup>, Tetsushi Watanabe<sup>1</sup> (<sup>1</sup>Department of Public  
Health, Kyoto Pharmaceutical Univ., <sup>2</sup>Forest Department Sarawak)

**O5-3     Move to P-116**

**O5-4     Effects of Fetal Exposure to PM 2.5-derived Organic Chemicals on the Immune  
System in Male Offspring**

○ Seiichi Yoshida<sup>1</sup>, Naomi Muraki<sup>2</sup>, Tsuyoshi Ito<sup>2</sup>, Takamichi Ichinose<sup>1</sup> (<sup>1</sup>Oita Univ.  
NHS, <sup>2</sup>JARI)

## Poster Session

Odd: September 10 (Mon) 13:30 - 14:35 Room C (1F)

Even: September 10 (Mon) 14:35 - 15:20 Room C (1F)

### Environmental Pollutants

**P-001    Oxidative potential of size-segregated airborne particulate matters and the contribution of polycyclic aromatic hydrocarbon quinones to the activity**

○ Akira Toriba<sup>1</sup>, Ayaka Morii<sup>1</sup>, Yuki Teramura<sup>1</sup>, Chiharu Homma<sup>1</sup>, Ning Tang<sup>1,2</sup>, Kazuichi Hayakawa<sup>2</sup> (<sup>1</sup>Institute of Medical, Pharmaceutical and Health Sciences, <sup>2</sup>Institute of Nature and Environmental Technology, Kanazawa University)

**P-002    Damage of rat dorsal root ganglion neurons by methylmercury through activation of the TNF signaling**

○ Eiko Yoshida<sup>1</sup>, Yu Sasaki<sup>1</sup>, Yo Shinoda<sup>2</sup>, Satoshi Tatsumi<sup>2</sup>, Yasuyuki Fujiwara<sup>2</sup>, Toshiyuki Kaji<sup>1</sup> (<sup>1</sup>Fac. of Pharm. Sci., Tokyo Univ. of Sci., <sup>2</sup>Sch. Pharm., Tokyo Univ. Pharm. & Life Sci.)

**P-003    Adsorption capability of strontium and cesium ions depend upon the hydrocolloid in basil seed (*Ocimum basilicum*)**

○ Yugo Uematsu, Fumihiko Ogata, Takehiro Nakamura, Naohito Kawasaki (Fac. Pharm., Kindai Univ.)

**P-004    Comparison of world air pollution from the point of view of polycyclic aromatic hydrocarbons**

○ Kazuichi Hayakawa<sup>1</sup>, Edward Gou Nagato<sup>1</sup>, Ning Tang<sup>1</sup>, Akira Toriba<sup>2</sup> (<sup>1</sup>Inst. of Nature and Environ. Technol., Kanazawa Univ. and <sup>2</sup>Inst. of Pharm. Sci., Kanazawa Univ.)

**P-005    Response of p62 and Nbr1 to methylmercury**

○ Yasukazu Takanezawa, Ryohei Harada, Ryosuke Nakamura, Yuka Sone, Shimpei Uraguchi, Masako, Kiyono (Dept. of Public Health, School of Pharmacy, Kitasato Univ.)

**P-006    Relationship between Atmospheric Environmental Factors and Emergency Department Visits for Asthma in Kyoto, Japan**

○ Mohammad Shahriar Khan<sup>1</sup>, Souleymane Coulibaly<sup>1</sup>, Takahiro Matsumoto<sup>1</sup>, Yoshitaka Yano<sup>2</sup>, Makoto Miura<sup>3</sup>, Yukio Nagasaka<sup>2</sup>, Masayuki Shima<sup>3</sup>, Nobuyuki Yamagishi<sup>4</sup>, Keiji Wakabayashi<sup>1,5</sup>, Tetsushi Watanabe<sup>1</sup>, (<sup>1,2</sup>Kyoto Pharm. Univ., <sup>3</sup>Rakuwakai Otowa Hospital, <sup>3</sup>Hyogo Col. Med., <sup>4</sup>Fac. Pharm. Sci., Setsunan University, <sup>5</sup>Grad. Div. Nutri. Environ. Sci., Shizuoka Uni.)

- P-007 Determination of polycyclic aromatic hydrocarbon quinones in mainstream of heat-not-burn tobacco cigarettes**  
 ○ Riku Yamazaki<sup>1</sup>, Ning Tang<sup>1,2</sup>, Kazuichi Hayakawa<sup>2</sup>, Ryo Suzuki<sup>1</sup>, Akira Toriba<sup>1</sup>  
 (<sup>1</sup>Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University,  
<sup>2</sup>The Institute of Nature and Environmental Technology, Kanazawa University)
- P-008 Inhibitory effect of organophosphate flame retardants on carboxylesterase activity in rat liver and small-intestinal microsomes**  
 Yukie Tsugoshi<sup>1,2</sup>, ○ Yoko Watanabe<sup>1</sup>, Kazumi Sugihara<sup>3</sup>, Shigeyuki Kitamura<sup>1</sup> (<sup>1</sup>Nihon Pharmaceut. Univ., <sup>2</sup>Yoshida Pharmaceutical Co., <sup>3</sup>Fac. Pharmaceut. Sci. Hiroshima International Univ.)
- P-009 Mechanism underlying the reduction in the expression of growth hormone in rat fetus by maternal exposure to dioxin**  
 Yukiko Hattori<sup>1</sup>, Tomoki Takeda<sup>1,2</sup>, Yoshitaka Tanaka<sup>1</sup>, ○ Yuji Ishii<sup>1</sup> (<sup>1</sup>Grad. Sch. Pharmaceut. Sci., Kyushu Univ., <sup>2</sup>Japan Bioassay Research Center)
- P-010 Changes in the expression level of enzymes related to S-adenosylmethionine (SAM) in fetal hypothalamus by maternal exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)**  
 ○ Hiroe Sano<sup>1</sup>, Ren-Shi Li<sup>2</sup>, Yuki Matsuo<sup>2</sup>, Takeshi Matsushita<sup>1</sup>, Hong-Bin Chen<sup>2</sup>, Takayuki Koga<sup>3</sup>, Tomoki Takeda<sup>2,4</sup>, Yoshitaka Tanaka<sup>2</sup>, Yuji Ishii<sup>2</sup> (<sup>1</sup>Fac Pharmaceut Sci., Kyushu Univ., <sup>2</sup>Grad Sch Pharmaceuti Sci., Kyushu Univ., <sup>3</sup>Daiichi University of Pharmacy, <sup>4</sup>Japan Bioassay Research Center)
- P-011 Bacterial heavy metal transporter MerC increases mercury and arsenic accumulation in plant**  
 ○ Yuka Sone, Saki Kanazawa, Shimpei Uraguchi, Ryosuke Nakamura, Yasukazu Takanezawa, Masako Kiyono (Sch. Pharm. Sci., Kitasato Univ.)
- P-012 Identification of toxic degradation products by the chlorination of chlorpromazine**  
 ○ Kazumi Sugihara<sup>1</sup>, Satoshi Okada<sup>1</sup>, Kazunori Kunisawa<sup>1</sup>, Kiyoshi Ikeda<sup>1</sup>, Ryo Shimizu<sup>1</sup>, Shigeyuki Kitamura<sup>2</sup>, Seigo Sanoh<sup>3</sup>, Yaichiro Kotake<sup>3</sup>, Shigeru Ohta<sup>3,4</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Hiroshima Int'l Univ., <sup>2</sup>Nihon Pharm. Univ., <sup>3</sup>Grad. Sch. Biomed. Health & Sci., Hiroshima Univ., <sup>4</sup>Wakayama Med. Univ.)
- P-013 Nr2f2 and CSE are key proteins repressing methylmercury poisoning symptoms in mice**  
 ○ Masahiro Akiyama<sup>1</sup>, Takamitsu Unoki<sup>1</sup>, Yasuhiro Shinkai<sup>1</sup>, Isao Ishii<sup>2</sup>, Masayuki Yamamoto<sup>3</sup>, Takaaki Akaike<sup>4</sup>, Yoshito Kumagai<sup>1</sup> (<sup>1</sup>Fac. Med. Univ. of Tsukuba., <sup>2</sup>Health Chemistry, Showa Pharmaceutical Univ., <sup>3</sup>Med. Biochem. Tohoku Univ., <sup>4</sup> Environ. Med & Mol. Toxicol. Tohoku Univ.)

**P-014 Nrf2 and CSE are essential for repression of environmental electrophiles-mediated toxicity in primary mouse hepatocytes**

○ Takamitsu Unoki<sup>1</sup>, Masahiro Akiyama<sup>2</sup>, Yasuhiro Shinkai<sup>2</sup>, Isao Ishii<sup>3</sup>, Masayuki Yamamoto<sup>4</sup>, Takaaki Akaike<sup>5</sup>, Yoshito Kumagai<sup>2</sup> (<sup>1</sup>Dept. Basic Med. Sci., Nat. Inst. Minamata Dis., <sup>2</sup>Fac. Med., Univ. of Tsukuba., <sup>3</sup>Health Chem., Showa Pharmaceut. Univ., <sup>4</sup>Med. Biochem., Tohoku Univ., <sup>5</sup> Environ. Med & Mol. Toxicol., Tohoku Univ.)

**P-116 The effects of nicotine and PM<sub>2.5</sub> on trace elements distribution in lung microvascular endothelial cells (LMECs)**

○ Eiko Sakurai<sup>1</sup>, Eiichi Sakurai<sup>2</sup>, Sigeo Matsuyama<sup>3</sup>, Keizo Ishii<sup>3</sup>, Tomihiro Kamiya<sup>4</sup>, Takahiro Satoh<sup>4</sup> (<sup>1</sup>Fac. Pharmacy, Iwaki Meisei Univ.<sup>2</sup>Fac. Pharmaceut. Sci., Tokushimabunnri Univ., <sup>3</sup>Grad. Sch. Enginneer. Sci. Tohoku Univ., <sup>4</sup>TARRI, QST,)

## Endocrine Disruptors

**P-015 Characterization of peroxisome proliferator activated receptor (PPAR) in cartilage fish *Leucoraja erinacea***

○ Youichirou Ishii<sup>1</sup>, Youhei Hiromori<sup>1,2</sup>, Takayuki Miyagi<sup>1</sup>, Hisamitsu Nagase<sup>1,3</sup>, L. Filipe C. Castro<sup>4</sup>, Tsuyoshi Nakanishi<sup>1</sup> (<sup>1</sup>Gifu Pharmaceutical Univ., <sup>2</sup>College of Pharm, Suzuka medical science Univ., <sup>3</sup>Gifu Univ. of Medical Science, <sup>4</sup>CIIMAR, University of Porto)

## Neural Toxicity

**P-016 Elevation of endocannabinoids in mice brain by synthetic cannabinoids and its relevance to the biological effects**

○ Ren-Shi Li<sup>1</sup>, Ryo Fukumori<sup>2</sup>, Tomoki Takeda<sup>1,5</sup>, Satoshi Morimoto<sup>1</sup>, Kazuhito Watanabe<sup>3</sup>, Kosuke Aritake<sup>3</sup>, Taku Yamaguchi<sup>2</sup>, Ruri Kikura-Hanajiri<sup>4</sup>, Yoshitaka Tanaka<sup>1</sup>, Tsuneyuki Yamamoto<sup>2</sup>, Yuji Ishii<sup>1</sup> (<sup>1</sup>Grad Sch Pharmaceut Sci, Kyushu Univ., <sup>2</sup>Fac Pharmaceut Sci, Nagasaki Intl Univ., <sup>3</sup>Daiichi Univ of Pharmacy, <sup>4</sup>NIHS, <sup>5</sup>Japan Bioassay Research Center)

**P-017 Paraquat-induced neuronal loss and movement disorder is caused by extracellular Zn<sup>2+</sup> influx into nigral dopaminergic neurons**

○ Hiroki Morioka, Ryusuke Nishio, Azusa Takeuchi, Haruna Tamano, Atsushi Takeda (Grad. Sch. Pharm. Sci., Univ. Shizuoka)

**P-018 Enhancement of hippocampal Zn<sup>2+</sup> toxicity via amyloid  $\beta_{1-42}$  along with aging and its defense strategy**

○ Hiroki Suzuki, Shuhei Kobuchi, Wakana Hashimoto, Haruna Tamano, Atsushi Takeda (Grad. Sch. Pharm. Sci., Univ. Shizuoka)

## Foods and Pesticides

**P-019 Degradation of edible oils by fats and fatty oils tests**

Akihiro Kikuta, Yasunori Sato, ○ Toshiyuki Kimura (Fac. Pharmaceut. Sci., Hokuriku Univ.)

**P-020 Antimutagenic effects of constituents from the seeds of *Actinidia chinensis* Planch**

○ Daisuke Imahori, Takahiro Matsumoto, Taishi Sumida, Kazuki Achiwa, Hayato Murai, Tetsushi Watanabe (Department of Public Health, Kyoto Pharm. Univ.)

**P-021 *In vitro* and *in vivo* antimutagenic effects of extracts and isolated compounds from fermented brown rice with *Aspergillus oryzae* (FBRA)**

Takahiro Matsumoto, Masumi Kibi, ○ Taishi Sumida, Eriko Inoue, Marina Otake, Tetsushi Watanabe (Department of Public Health, Kyoto Pharmaceutical Univ.)

**P-022 Genotoxicity assessment of nutmeg**

○ Yuya Deguchi<sup>1</sup>, Megumi Hamano Nagaoka<sup>1</sup>, Naohiro Iwata<sup>2</sup>, Daisuke Kobayashi<sup>3</sup>, Takao Shimazoe<sup>3</sup> and Hiroaki Nagaoka<sup>1</sup> (<sup>1</sup>Fac. of Pharm. Sci., Nagasaki International Univ., <sup>2</sup>Dept. of Pharm., Okayama Univ. Hosp., <sup>3</sup>Grad. Sch. Pharm. Sci., Kyushu Univ.)

## Metals

**P-023 Recovery of molybdenum using waste biomass wheat bran from water phase**

○ Fumihiko Ogata, Aya Sasano, Takehiro Nakamura, Naohito Kawasaki (Fac. Pharm. Kindai Univ.)

**P-024 Structure-activity relationship of [1,5]azastibocines in cytotoxicity to vascular endothelial cells**

○ Takato Hara<sup>1</sup>, Yoshihiro Nonaka<sup>1</sup>, Shuji Yasuike<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Chika Yamamoto<sup>1</sup> (<sup>1</sup>Fac. Pharmaceut. Sci., Toho Univ., <sup>2</sup>School of Pharm., Aichi Gakuin Univ. <sup>3</sup>Fac. Pharmaceut. Sci., Tokyo Univ. of Sci.)

**P-025 Structure-activity relationships for zinc phenanthroline complexes in the proliferation of vascular endothelial and smooth muscle cells**

○ Mitsuhiro Mori<sup>1</sup>, Tomoya Fujie<sup>1</sup>, Takato Hara<sup>1</sup>, Takehiro Nakamura<sup>2</sup>, Naohito Kawasaki<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Chika Yamamoto<sup>1</sup> (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Fac. Pharm. Sci., Kindai Univ., <sup>3</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)

**P-026 Metabolism of selenocompounds in the gastrointestinal tract and their nutritional availabilities**

○ Kazuaki Takahashi<sup>1</sup>, Noriyuki Suzuki<sup>1</sup>, Yasumitsu Ogra<sup>1</sup> (<sup>1</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)

- P-027 Abnormal expression of the enzymes involved in the synthesis of reactive sulfur species in vascular endothelial cells after exposure to lead**  
 ○ Naotoshi Udagawa<sup>1</sup>, Tomoya Fujie<sup>1</sup>, Yoshito Kumagai<sup>2</sup>, Chika Yamamoto<sup>1</sup>, Toshiyuki Kaji<sup>3</sup> (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Fac. Med., Univ. Tsukuba, <sup>3</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-028 Analysis of mechanisms underlying transcriptional induction of metallothionein in vascular endothelial cells using organic-inorganic hybrid molecules**  
 ○ Fukuta Takenaka<sup>1</sup>, Eiko Yoshida<sup>1</sup>, Tomoya Fujie<sup>1,2</sup>, Toshiyuki Kaji<sup>1</sup> (<sup>1</sup>Fac. of Pharm. Sci., Tokyo Univ. of Sci., <sup>2</sup>Fac. of Pharm. Sci., Toho Univ.)
- P-029 Cadmium induces the expression of a zinc transporter, ZIP8, via the JNK/ NF-κB pathway in vascular endothelial cells**  
 ○ Keisuke Ito, Eiko Yoshida, Toshiyuki Kaji (Fac. of Pharm. Sci., Tokyo Univ. of Sci.)
- P-030 Novelty zeolite produced from fly ash and elucidation of adsorption mechanism of lead ion**  
 ○ Yuhei Kobayashi, Fumihiko Ogata, Takehiro Nakamura, Naohito Kawasaki (Fac. Pharm., Kindai Univ.)
- P-031 Improvements of environmental water quality using organic and inorganic materials**  
 ○ Eri Nagahashi, Fumihiko Ogata, Takehiro Nakamura, Naohito Kawasaki (Fac. Pharm., Kindai Univ.)
- P-032 Induction of ZIP13, a zinc transporter, by overexpression of FGF-2 in vascular endothelial cells**  
 ○ Chihiro Miyauchi, Eiko Yoshida, Toshiyuki Kaji (Faculty of Pharmaceutical Sciences, Tokyo University of Science)
- P-033 Involvement of heat shock protein gene expression on cadmium toxicity in HK-2 cells**  
 ○ Jin-Yong Lee<sup>1</sup>, Naoshi Konagaya<sup>1</sup>, Maki Tokumoto<sup>1</sup>, Masahiko Satoh<sup>1</sup> (<sup>1</sup>Sch. Pharm., Aichi Gakuin Univ.)
- P-034 Mechanism of cadmium renal toxicity through the inhibition of transcriptional activity of MEF2A**  
 Jin-Yong Lee<sup>1</sup>, Masaki Kondo<sup>1</sup>, Maki Tokumoto<sup>1</sup>, ○ Masahiko Satoh<sup>1</sup> (<sup>1</sup>Sch. Pharm., Aichi Gakuin Univ.)

- P-035 Synthesis of magnesium-iron-aluminium complex adsorbents and their adsorptability of phosphate ion.**  
○ Riku Nagafuji, Takehiro Nakamura, Yuhei Kobayashi, Fumihiko Ogata, Naohito Kawasaki (Fac. Pharm., Kindai Univ.)
- P-036 Methylmercury induced neuronal cell death via M1-microglia activation**  
○ Takayuki Hoshi, Takashi Toyama, Akira Naganuma, Gi-Wook Hwang (Graduate School of Pharmaceutical Sciences, Tohoku University)
- P-037 Protective role of glutathione in cadmium acute renal toxicity**  
○ Maki Tokumoto<sup>1</sup>, Hitomi Douke<sup>1</sup>, Chikage Mori<sup>1</sup>, Jin-Yong Lee<sup>1</sup>, Masahiko Satoh<sup>1</sup> (<sup>1</sup>Sch. of Pharm., Aichi Gakuin Univ.)
- P-038 A novel function of metallothionein-3: Inactivation of methylmercury by the protein-bound sulfane sulfur**  
○ Yunjie Ding<sup>1</sup>, Yasuhiro Shinkai<sup>1,2</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Comprehensive Human Sci., Univ. of Tsukuba, <sup>2</sup>Fac. of Med., Univ. of Tsukuba)
- P-039 The role of TNF receptor 3 in neuronal damage induced by methyl mercury in mouse brain**  
○ Yohei Tsunoda, Takashi Toyama, Takayuki Hoshi, Akira Naganuma, Gi-Wook Hwang (Grad. Sch. Pharmaceut. Sci., Tohoku Univ.)
- P-040 Biotransformation of methylmercury in mice: An examination with the metabolite produced by interaction with reactive sulfur species**  
○ Yusuke Katayama<sup>1</sup>, Yumi Abiko<sup>1,2</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Comp. Human Sci., Univ. Tsukuba, <sup>2</sup>Fac. Med., Univ. Tsukuba)
- P-041 Structure-activity relationships for Zn(hmphenpyr-thione)<sub>2</sub> cytotoxicity in vascular endothelial cells**  
○ Yuki Koder<sup>1</sup>, Taro Yamamoto<sup>1</sup>, Tomoya Fujie<sup>1</sup>, Takehiro Nakamura<sup>2</sup>, Naohito Kawasaki<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Chika Yamamoto<sup>1</sup> (<sup>1</sup>Fac. Pharm. Sci., Toho University, <sup>2</sup>Fac. Pharm. Sci., Kindai Univ., <sup>3</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-042 Cell type-dependent induction of metallothionein expression by metal-diethyldithiocarbamate complexes in cultured cells**  
○ Shinjiro Ihara<sup>1</sup>, Azusa Tsuchida<sup>1</sup>, Tomoya Fujie<sup>1</sup>, Hiroshi Naka<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Chika Yamamoto<sup>1</sup> (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Res. Center Mater. Sci., Nagoya Univ., <sup>3</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)

**P-043    Suppression mechanisms of the fibrinolytic activity by sodium arsenite in cultured human vascular endothelial EA.hy926 cells**

○ Tsuyoshi Nakano<sup>1</sup>, Tsutomu Takahashi<sup>1</sup>, Go Kato<sup>1</sup>, Yayoi Tsuneoka<sup>1</sup>, Yo Shinoda<sup>1</sup>, Chika Yamamoto<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Yasuyuki Fujiwara<sup>1</sup> (<sup>1</sup>Sch. of Pharm., Tokyo Univ. of Pharm. & Life Sci., <sup>2</sup>Fac. of Pharm. Sci., Toho Univ., <sup>3</sup>Fac. of Pharm. Sci., Tokyo Univ. of Sci.,)

**P-044    A novel mechanism involved in the induction of TNF- $\alpha$  expression by methylmercury**

○ Chika Kaneko, Takashi Toyama, Akira Naganuma, Gi-Wook Hwang (Graduate School of Pharmaceutical Sciences, Tohoku University)

**P-045    Protection against cadmium cytotoxicity in vascular endothelial cells by manganese**

○ Tomoya Fujie<sup>1</sup>, Momoka Abe<sup>1</sup>, Reika Ando<sup>2</sup>, Chika Yamamoto<sup>1</sup>, Toshiyuki Kaji<sup>2</sup> (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)

**P-046    Involvement of RIP1 in methylmercury toxicity through activation of tmRT1**

○ Takashi Toyama, Kento Matsuda, Akira Naganuma, Gi-Wook Hwang (Graduate School of Pharmaceutical Sciences, Tohoku University)

**P-047    Investigation into absorption and retention characteristic of selenium from selenotrisulfide in neuronal cells**

○ Ryosuke Mori<sup>1</sup>, Risako Hayashi<sup>1</sup>, Sakura Yoshida<sup>1</sup>, Takeshi Fuchigami<sup>1</sup>, Mamoru Haratake<sup>2</sup>, Morio Nakayama<sup>1</sup> (<sup>1</sup>Graduate School of Biomedical Sciences, Nagasaki University, <sup>2</sup>Faculty of Pharmaceutical Sciences, Sojo University)

**P-048    The therapeutic effects of oleanolic acid 3-orthoester type saponin on methylmercury toxicity**

○ Ryosuke Nakamura, Yasukazu Takanezawa, Yuka Sone, Shimpei Uraguchi, Tatsuya Shirahata, Yoshinori Kobayashi, Masako Kiyono (Sch. Pharm., Kitasato Univ.)

## **Oxidative Stress**

**P-049    Intracellular labile zinc level is a determinant of vulnerability of cultured astrocytes to oxidative stress, and is regulated, at least in part, by TRPM7 expressed at plasma membrane**

○ Kazuki Nagasawa, Takahiro Furuta, Akihiro Ohishi (Dept. of Environ. Biochem., Kyoto Pharm. Univ.)

**P-050    Lipo-3 is a key cell death effector of a GPx4 depleted novel lipid peroxidation dependent cell death, Lipoxytosis, and not a ferroptosis effector.**

○ Kahori Oka<sup>1,2</sup>, Moe Nagahisa<sup>1</sup>, Rie Fukuda<sup>1</sup>, Masaki Matsuoka<sup>1,2</sup>, Hirotaka Imai<sup>1,2</sup> (<sup>1</sup>Sch. Pharmaceut. Sci., Kitasato Univ., <sup>2</sup>AMED-CREST)

- P-051 Evaluation of glutathione peroxidase (GPx)-like activity of imidazole-2-selone derivatives as a core moiety of selenoneine**  
 ○ Noriyuki Suzuki<sup>1</sup>, Tomoki Yoshizawa<sup>1</sup>, Yasumitsu Ogra<sup>1</sup> (<sup>1</sup>Grad. Sch. Pharmaceut. Sci., Chiba Univ.)
- P-052 Persulfide as a protection factor to block peroxidation of protein cysteine residue**  
 ○ Nho C. Luong<sup>1</sup>, Yumi Abiko<sup>1,2</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Comp. Human Sci., Univ. Tsukuba, <sup>2</sup>Fac. Med., Univ. Tsukuba)
- P-053 Atypical antipsychotic olanzapine induces oxidative stress in the hypothalamus**  
 ○ Natsumi Hattori, Haruka Morinaka, Asuka Kaizaki-Mitsumoto, Satoshi Numazawa (<sup>1</sup>Division of Toxicology, Department of Pharmacology, Toxicology and Therapeutics, Showa University School of Pharmacy)
- P-054 A unique redox reaction: one-electron reduction of quinoid compounds by persulfide**  
 ○ Yumi Abiko<sup>1,2</sup>, Yumi Nakai<sup>3</sup>, Nho C Luong<sup>2</sup>, Jon M Fukuto<sup>4</sup>, Yoshito Kumagai<sup>1,2</sup> (<sup>1</sup>Fac. Med., Univ. Tsukuba., <sup>2</sup>Grad. Sch. Comp. Human. Sci., <sup>3</sup>JEOR RESONANCE Inc., <sup>4</sup>Sonoma State Univ.)
- P-055 Analysis of novel redox-regulation mechanisms for pyruvate kinase M2 (PKM2) that is rate-limiting enzyme of glycolysis.**  
 ○ Hayato Irokawa, Shin Kato, Shota Takahashi, Satoshi Numasaki, Shusuke Kuge (Dept. Microbiol., Fac. Pharmaceut. Sci., Tohoku Med. Pham. Univ.)

## Immunotoxicity · Infectious Diseases

- P-056 Detection of skin sensitization chemicals in HaCaT cells by Nrf2-dependent luciferase activation: Effects of inhibition of xenobiotic metabolizing enzymes**  
 ○ Kenta Sumida, Kazuki Sekine, Osamu Endo, Masashi Sekimoto (Sch.Life Environ. Sci.,Azabu Univ.)
- P-057 Involvement of sphingolipids from *Aspergillus fumigatus* in inflammatory cytokines production**  
 ○ Susumu Ohkawara<sup>1</sup>, Shoko Imada<sup>1</sup>, Takashi Isobe<sup>1</sup>, Nobumitsu Hanioka<sup>1</sup>, Hideto Jinno<sup>2</sup>, Takayuki Kanaya<sup>3</sup>, Noriyasu Hada<sup>4</sup>, Isao Ohtsuka<sup>5</sup>, Toshiko Tanaka-Kagawa<sup>1</sup> (<sup>1</sup>Fac. of Pharm.,Yokohama Univ. of Pharm., <sup>2</sup>Fac. of Pharm., Meijo Univ., <sup>3</sup>Dept. Pharm., Natl. Univ. Health and Welfare, <sup>4</sup>Fac. Pharm. Sci., Tokyo Univ. of Sci., <sup>5</sup>Sch. of Pharm., Kyushu Univ. of Health and Welfare)

**P-058 Potential immunomodulative effect of cinnamic acid derivatives and flavonoids on functions of immune cells**

○ Erina Shiraishi<sup>1</sup>, Akiko Ido<sup>1</sup>, Hisamitsu Nagase<sup>1,2</sup>, Tsuyoshi Nakanishi<sup>1</sup> (<sup>1</sup>Gifu Pharm. Univ., <sup>2</sup>Gifu Univ. of Med Sci.)

**P-059 Inorganic polyphosphate inhibits LPS-induced septic shock and macrophage migration**

○ Takashi Ashino<sup>1</sup>, Mikako Terashima<sup>2</sup>, Yumi Kawazoe<sup>1,3</sup>, Toshikazu Shiba<sup>2,3</sup>, Atsufumi Manabe<sup>2</sup>, Satoshi Numazawa<sup>1</sup> (<sup>1</sup>Div. Toxicol., Showa Univ. Sch. Pharm., <sup>2</sup>Div. Aesthet. Dent. Clin. Cariol., Showa Univ. Sch. Dent., <sup>3</sup>Regenetiss Inc.)

**P-060 Effect of oxidized olive oil on phagocytic and migration capacity of macrophages**

○ Hirofumi Ogino, Haruki Ueda, Tomofumi Okuno, Tomohiro Arakawa, Hitoshi Ueno (Fac. Pharmaceut. Sci., Setsunan Univ.)

**P-061 Effects of selenium deficiency on atopic dermatitis**

○ Tomohiro Arakawa, Haruka Matsuura, Hirofumi Ogino, Tomofumi Okuno, Hitoshi Ueno (Fac. Pharmaceut. Sci., Setsunan Univ.)

## **Cellular Responses**

**P-062 Regulation of cell differentiation by FXR and LXR: contribution to carcinogenesis**

○ Tomofumi Fujino, Rei Kato, Masaki Beppu, Satoshi Murakami, and Makio Hayakawa (Tokyo univ. pharm. Life sci.)

**P-063 Analysis of pan-caspase inhibitor-induced LPS-activated macrophage death**

○ Miho Hanatani<sup>1</sup>, Atsushi Koike<sup>1</sup>, Fumio Amano<sup>2</sup>, Ko Fujimori<sup>1</sup> (<sup>1</sup>Dept. Pathobiochem., Osaka Univ. Pharm. Sci., <sup>2</sup>Osaka Univ. Pharm. Sci)

**P-064 Transcriptional induction of perlecan via the purinergic P2 receptor in vascular endothelial cells**

○ Mayu Tominaga<sup>1</sup>, Eiko Yoshida<sup>1</sup>, Mitsutoshi Tsukimoto<sup>1</sup>, Takato Hara<sup>1,2</sup>, Chika Yamamoto<sup>2</sup>, Toshiyuki Kaji<sup>1</sup> (Fac. of Pharm. Sci., <sup>1</sup>Tokyo Univ. of Sci. and <sup>2</sup>Toho University)

**P-065 Role of cellular glutathione against thio-dimethylarsinic acid-induced chromosomal numerical aberration in Chinese hamster lung fibroblasts V79 cells**

○ Kayoko Kita, Takumi Sekiguchi, Natsumi Shigetome, Taro Honma, Toshihide Suzuki (Fac. Pharma-Sci., Teikyo Univ.)

**P-066 Screening of intracellular signaling molecules involved in AhR activation**

○ Shunsuke Tomita, Osamu Endo<sup>1</sup>, Masakuni Degawa<sup>2</sup>, Masasi Sekimoto (<sup>1</sup>Sch.Life Environ.Sci.,Azabu Univ., <sup>2</sup> Sch.Pharmaceut.Sci.,Univ.Shizuoka.)

- P-067 Effects of autophagy on anti-cancer agents-induced apoptosis**  
 ○ Keisuke Sato, Ryosuke Tatsunami, Yoshiko Tampo (Faculty of Pharmaceutical Sciences, Department of Public Health, Hokkaido University of Science)
- P-068 Difference in transcriptional activity of human and mouse aryl hydrocarbon receptor (AhR)**  
 ○ Nao Saito, Mayu Kawaguchi, Mikuru Onuki, Naoya Yamashita, Kiyomitsu Nemoto, Yuichiro Kanno (Fac. Pharmaceut. Sci., Toho Univ.)
- P-069 Induction of heme oxygenase-1 by photodynamic therapy using talaporfin sodium in cultured rat malignant meningioma KMY-J cells**  
 ○ Tsutomu Takahashi<sup>1</sup>, Suzuka Misawa<sup>1</sup>, Akari Takeguchi, Saki Suzuki<sup>1</sup>, Yo Shinoda<sup>1</sup>, Jiro Akimoto<sup>2</sup>, Yasuyuki Fujiwara<sup>1</sup> (<sup>1</sup>Sch. of Pharm., Tokyo Univ. of Pharm. and Life Sci., <sup>2</sup>Tokyo Med. Univ.)
- P-070 Roles of the multifunctional protein p62/SQSTM1 in oxidative stress-induced parthanatos**  
 ○ Midori Suzuki, Yusuke Hirata, Takuya Noguchi, Atsushi Matsuzawa (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- P-071 A genome-wide CRISPR screen for regulators of saturate fatty acid-induced IRE1 activation**  
 ○ Shunsuke Kasai<sup>1</sup>, Sosuke Akagi<sup>1</sup>, Nozomu Kono<sup>1,2</sup> and Hiroyuki Arai<sup>1,3</sup> (<sup>1</sup>Dept. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Univ. of Tokyo, <sup>2</sup>PRIME, AMED, <sup>3</sup>AMED-CREST, AMED)
- P-072 Elucidation of the mechanism by which Gefitinib induces IL-1 $\beta$ -mediated inflammation**  
 ○ Rio Naganuma, Yuki Kudoh, Yusuke Hirata, Takuya Noguchi, Atsushi Matsuzawa (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- P-073 Effect of iron chelator deferoxamine on development of malignancy of renal cell carcinoma cells**  
 ○ Akinori Sugiyama, Yui Saito, Tamami Kudo, Nobutaka Ogasawara, Yasushi Kawasaki, Sei Yonezawa, Yasuhiro Natori (Sch. Pharm., Iwate Medical Univ.)
- P-074 A role of aryl hydrocarbon receptor in breast cancer stem cell-derived mammosphere.**  
 ○ Naoya Yamashita<sup>1</sup>, Nao Saito<sup>1</sup>, Kensuke Teraï<sup>2</sup>, Nobuyuki Hiruta<sup>2</sup>, Hideaki Bujo<sup>2</sup>, Kiyomitsu Nemoto<sup>1</sup>, Yuichiro Kanno<sup>1</sup> (<sup>1</sup>Fac. Pharmaceut. Sci., Toho Univ., <sup>2</sup>Toho Univ Sakura Medical Center)

- P-075 Effect of amyloid  $\beta$  on human astrocytoma U-251MG cells**  
 ○ Tomofumi Okuno<sup>1</sup>, Chiho Miyoshi<sup>1</sup>, Chieri Tanigami<sup>1</sup>, Hirofumi Ogino<sup>1</sup>,  
 Tomohiro Arakawa<sup>1</sup>, Hitoshi Ueno<sup>1</sup> (<sup>1</sup>Fac. Pharmaceut. Sci., Setsunan Univ.)
- P-076 Role of the p160 steroid receptor coactivator (SRC) family on nuclear receptor constitutive active/androstane receptor (CAR) -mediated gene expression**  
 ○ Yuichiro Kanno, Haruka Yamaguchi Nao Saito, Naoya Yamashita,  
 Kiyomitsu Nemoto, Yoshio Inouye (Fac. Pharmaceut. Sci., Toho-Univ.)
- P-077 Immune regulation by commensal bacteria-derived molecules**  
 ○ Naoto Fujioka, Kazuhito Hayashi, Katsuhiro Kohno, Shungo Sasaki, Saotomo Itoh,  
 Shigeaki Hida (Grad. Sch. Pharmaceut. Sci. Nagoya-City Univ.)

## Biochemistry

- P-078 Impact analysis of C8 $\gamma$ -deficiency on glucose and lipid metabolism**  
 ○ Katsuya Yamamoto, Iori Tsubakihara, Aoki Akira, Hisamitsu Nagase,  
 Tsuyoshi Nakanishi (Gifu Pharm. Univ.)
- P-079 Contribution of aryl hydrocarbon receptor (AHR) to the brain sexual differentiation and gonadal development in puberty.**  
 ○ Haruki Fukumitsu<sup>1</sup>, Tomoki Takeda<sup>1,2</sup>, Yukiko Hattori<sup>1</sup>, Arisa Nakamura<sup>1</sup>,  
 Kyoko Nishida<sup>1</sup>, Yoshitaka Tanaka<sup>1</sup>, Yuji Ishii<sup>1</sup> (<sup>1</sup>Grad. Sch. Pharmaceut. Sci., Kyushu Univ., <sup>2</sup>Japan Bioassay Research Center)
- P-080 Role of prostaglandin terminal synthases in contact hypersensitivity**  
 ○ Tsubasa Ochiai<sup>1</sup>, Yuka Sasaki<sup>1</sup>, Chieko Yokoyama<sup>2</sup>, Shuntaro Hara<sup>1</sup> (<sup>1</sup>Sch. of Pharm., Showa Univ., <sup>2</sup>Kanagawa Inst. of Tech.)
- P-081 A Proximity Labeling Strategy Provides Insights into Proteomes of Early Endosomes**  
 Shenwei Ni<sup>1</sup>, Kojiro Mukai<sup>1</sup>, Takehiro Suzuki<sup>2</sup>, Naoshi Dohmae<sup>2</sup>, Tomohiko Taguchi<sup>3,4</sup>,  
 Hiroyuki Arai<sup>1,5</sup> (<sup>1</sup>Department of Health Chemistry, Graduate School of Pharmaceutical Sciences, University of Tokyo, <sup>2</sup>Biomolecular Characterization Unit, RIKEN Center for Sustainable Resource Science, <sup>3</sup>Laboratory of Organelle Pathophysiology, Department of Integrative Life Sciences, <sup>4</sup>AMED-PRIME, <sup>5</sup>AMED-CREST)
- P-082 Metallothionein genes knockout by CRISPR/Cas9 system in 3T3-L1 adipocytes model**  
 ○ Yoshito Kadota<sup>1</sup>, Naoki Haraguchi<sup>1</sup>, Takashige Kawakami<sup>1</sup>, Shinya Suzuki<sup>1</sup> (<sup>1</sup>Fac. Pharmaceut. Sci., Tokushima Bunri Univ.)

**P-083    Function of nuclear receptor LXRs' novel ligand**

○ Sei Yonezawa<sup>1</sup>, Satoru Tamura<sup>1</sup>, Yasushi Kawasaki<sup>1</sup>, Akinori Sugiyama<sup>1</sup>,  
Yasuhiro Natori<sup>1</sup> (<sup>1</sup>Fac. Pharmaceut. Sci., Iwate Medical Univ.)

**Preventive Pharmacology**

**P-084    Study on relationship between mineral concentration in hair and lifestyle diseases**

○ Kaito Yamashiro<sup>1</sup>, Fumihiko Ogata<sup>1</sup>, Takehiro Nakamura<sup>1</sup>, Naohito Kawasaki<sup>1,2</sup>  
(<sup>1</sup>Department of Pharmacy, Faculty of Pharmacy, Kindai University, <sup>2</sup>Anti-aging Center, Kindai University)

**P-085    Study on relationship between mineral concentration in hair and hay fever or anti-aging for skin condition or alopecia**

○ Naohito Kawasaki<sup>1,2</sup>, Kaito Yamashiro<sup>1</sup>, Fumihiko Ogata<sup>1</sup>, Takehiro Nakamura<sup>1</sup>  
(<sup>1</sup>Department of Pharmacy, Faculty of Pharmacy, Kindai University, <sup>2</sup>Anti-aging Center, Kindai University)

**P-086    Analysis of micturition function in drug-induced menopausal mice**

○ Kosuke Wakayama<sup>1</sup>, Fumio Soeda<sup>1</sup>, Tatsunori Hashimoto<sup>1</sup>, Takayuki Koga<sup>1</sup>,  
Shogo Misumi<sup>2</sup>, Kazuo Takahama<sup>2,3</sup>, Akihisa Toda<sup>1</sup> (<sup>1</sup>Daiichi Univ. Pharm., <sup>2</sup>Grad. Sch. Pharmaceut. Sci., Kumamoto Univ., <sup>3</sup>Kumamoto Health Sci. Univ.)

**P-087    Effect of theanine on the proliferation of a colorectal cancer cell line Caco-2**

○ Mizuki Kishii<sup>1</sup>, Satoru Sakuma<sup>1</sup>, Yohko Fujimoto<sup>1</sup> (<sup>1</sup>Dept. Physiol. Chem., Osaka Univ. Pharmaceut. Sci.)

**P-088    Effect of allyl isothiocyanate on the differentiation of 3T3-L1 preadipocytes into mature adipocytes**

○ Kaho Tsujimoto<sup>1</sup>, Satoru Sakuma<sup>1</sup>, Yohko Fujimoto<sup>1</sup> (<sup>1</sup>Dept. Physiol. Chem., Osaka Univ. Pharmaceut. Sci.)

**P-089    Tumor suppressive effects of vitamin A in xenograft mice**

○ Noriko Takahashi<sup>1</sup>, Chuan Li<sup>1</sup>, Shinya Hasegawa<sup>1</sup>, Masahiro Yamasaki<sup>1</sup>, and  
Masahiko Imai<sup>1</sup> (<sup>1</sup>Lab. of Physiolog. Chem., Inst. of Med. Chem., Hoshi Univ.)

**P-090    Analysis of strain difference in suppressive effects of amino acid supplementation to chemical-induced dermatitis**

○ Takayuki Koga<sup>1</sup>, Kie Inoue<sup>1</sup>, Fuka Hirayama<sup>1</sup>, Tomoki Takeda<sup>2</sup>, Yuji Ishii<sup>2</sup>,  
Makoto Hiromura<sup>1</sup>, Fumio Soeda<sup>1</sup>, Akihisa Toda<sup>1</sup> (<sup>1</sup>Daiichi Univ. Pharm., <sup>2</sup>Grad. Sch. Pharmaceut. Sci., Kyushu Univ)

- P-091 Effects of vizantin and vizantin derivative on differentiation of 3T3-L1 adipocytes**  
 ○ Takashige KAWAKAMI, Nodoka KOMI, Naoto YAMAZAKI, Yoshito KADOTA, Hirofumi YAMAMOTO, Shinya SUZUKI (Faculty of Pharmaceutical Sciences, Tokushima Bunri University)
- P-092 Usefulness of serum and urinary lymphangiogenic growth factor VEGF-D as a potential biomarker for diabetic nephropathy in diabetes mellitus patients.**  
 ○ Yasushi Kawasaki<sup>1</sup>, Masahiro Yamashita<sup>2</sup>, Tomoyasu Oda<sup>3</sup>, Atumi Sasaki<sup>4</sup>, Sei Yonezawa<sup>1</sup>, Yasushiro Natori<sup>1</sup>, Yasushi Ishigaki<sup>3</sup>, Akinori Sugiyama<sup>1</sup> (<sup>1</sup>Sch. Pharmacy, Iwate Medical Univ., <sup>2</sup>Sch. Med. Sci., Iwate Medical Univ., <sup>3</sup>Dep. Internal Med., Iwate Medical Univ., <sup>4</sup>Morioka city Hosp.)
- P-093 Establishment of UCP1-reporter cell lines under the control of endogenous UCP1 promoter**  
 ○ Kota Ibaraki, Akira Aoki, Yoshinori Okamoto, Koji Ueda, Hideto Jinno (Faculty of Pharmacy, Meijo Univ.)
- P-094 The effect of Zingiberaceae extracts on UCP1 expression in rat brown adipocytes**  
 ○ Haruka Shiroyama, Akira Aoki, Yoshinori Okamoto, Koji Ueda, Hideto Jinno (Faculty of Pharmacy, Meijo Univ.)

## Analytical Chemistry

- P-095 Studies on a practical method to measure radioactive polonium in foods**  
 ○ Keisuke Soga, Akiko Hachisuka, Kazunari Kondo (National Institute of Health Sciences)
- P-096 Evaluation of heavy metals in clinical samples by laser ablation (LA)-ICP-MS**  
 ○ Makiko Iwase<sup>1</sup>, Noriyuki Suzuki<sup>1</sup>, Yu-ki Tanaka<sup>1</sup>, Hiroko Abe<sup>2</sup>, Akifumi Eguchi<sup>3</sup>, Hirotaro Iwase<sup>2,4</sup>, Chisato Mori<sup>3</sup>, Yasumitsu Ogra<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Pharm. Sci., Chiba Univ., <sup>2</sup>Edu. Res. Center Legal Med., Chiba Univ., <sup>3</sup>Center Prev. Med. Sci., Chiba Univ., <sup>4</sup>Grad. Sch. Med., Univ. Tokyo)
- P-097 Development and validation of standard measuring method of dibutyl phthalate and di(2-ethylhexyl)phthalate in indoor air**  
 ○ Toshiko Tanaka-Kagawa<sup>1</sup>, Ikue Saito<sup>2</sup>, Shinobu Sakai<sup>3</sup>, Tsuyoshi Kawakami<sup>3</sup>, Maiko Tahara<sup>3</sup>, Hitoshi Uemura<sup>4</sup>, Masahiro Chiba<sup>5</sup>, Shinji Takeuchi<sup>5</sup>, Aya Onuki<sup>2</sup>, Shiori Oizumi<sup>5</sup>, Takashi Isobe<sup>1</sup>, Sadayuki Ochi<sup>1</sup>, Susumu Ohkawara<sup>1</sup>, Yoshiaki Ikarashi<sup>3</sup>, Nobumitsu Hanioka<sup>1</sup>, Hideto Jinno<sup>6</sup> (<sup>1</sup>Yokohama Univ. Pharm., <sup>2</sup>Tokyo Metro. Inst. Public Health, <sup>3</sup>Natl. Inst. Health Sci., <sup>4</sup>Kanagawa Pref. Inst. Public Health, <sup>5</sup>Hokkaido Instit. Public Health, <sup>6</sup>Facul. Pharm., Meijo Univ.)

## Drug Metabolism

**P-098 Comparison between High-fat diet and Normal on activities/expressions of Cytochrom P450s in rats**

○ Naoto Uramaru<sup>1</sup>, Saho Shimada<sup>1</sup>, Yuta Atsukawa<sup>1</sup>, Yoko Watanabe<sup>1</sup>, Toshiyuki Higuchi<sup>1</sup> (<sup>1</sup>Division of Pharmaceutical Health Biosciences, Department of Pharmaceutical Sciences, Nihon Pharmaceutical University)

**P-099 Organ difference between kidney and liver in androgen-associated expression of cytochrome P450s in pigs**

○ Misaki Kojima<sup>1</sup>, Masakuni Degawa<sup>2</sup> (<sup>1</sup>National Agriculture and Food Research Organization (NARO), <sup>2</sup> School of Pharmaceutical Sciences, University of Shizuoka)

**P-100 Toxicity of *gin-nan* food poisoning-inducing substance in mice (3) - effect of CYP inhibitors on the toxicity -**

○ Nanae Taniguchi<sup>1</sup>, Mika Ishikawa<sup>1</sup>, Wataru Hayashishita<sup>1</sup>, Teruki Yoshimura<sup>1</sup>, Daisuke Kobayashi<sup>1</sup>, Keiji Wada<sup>1</sup> (<sup>1</sup>School of Pharmaceutical Sciences, Health Sciences University of Hokkaido)

**P-101 The mechanisms of amiodarone accumulation by its exposure in the tadpoles and its inhibitory effect of metamorphosis**

○ Seigo Sanoh<sup>1,2</sup>, Junpei Mori<sup>1</sup>, Hideki Hanada<sup>2</sup>, Keiko Kashiwagi<sup>2</sup>, Ken-ichi Suzuki<sup>3</sup>, Mitsuki Shigeta<sup>3</sup>, Takashi Yamamoto<sup>2,3</sup>, Kazumi Sugihara<sup>4</sup>, Shigeyuki Kitamura<sup>5</sup>, Akihiko Kashiwagi<sup>2</sup>, Shigeru Ohta<sup>1,6</sup>, Yaichiro Kotake<sup>1</sup>, (<sup>1</sup>Grad. Sch. Biomed. Health Sci., Hiroshima Univ., <sup>2</sup>Amphibian Research Center, Hiroshima Univ., <sup>3</sup>Grad. Sch. Sci., Hiroshima Univ., <sup>4</sup>Fac. Pharm. Sci., Hiroshima International Univ., <sup>5</sup>Nihon Pharmaceutical Univ., <sup>6</sup>Wakayama Med., Univ.)

**P-102 Metabolism of cannabinoids by human CYP2J2 enzyme**

○ Kazuhito Watanabe<sup>1</sup>, Satoshi Yamaori<sup>2</sup>, Noriyuki Usami<sup>3</sup>, Yuji Hasegawa<sup>1</sup> (<sup>1</sup>Daiichi Univ. Pharm., <sup>2</sup> Dept. Pharm., Shinshu Univ. Hosp., <sup>3</sup> Fac. Pharm. Sci., Hokuriku Univ.)

## Others

**P-103 Effect of exposure temperature on the cytotoxicity of a vesicant anticancer drugs**

○ Masaki Takaishi<sup>1</sup>, Kosuke Fujita<sup>1</sup>, Tatsuru Hiraga<sup>1</sup>, Megumi Sasaki<sup>1</sup>, Aiko Yamamuro<sup>1</sup>, Toshiaki Takeda<sup>2</sup>, Satoshi Asano<sup>1</sup> (<sup>1</sup>School of Pharmacy, International Univ. of Health and Welfare, <sup>2</sup>Fac. of Nursing, Iwate Prefectural Univ.)

**P-104 Study to clarify the mechanisms of extra rib**

○ Takayuki Kumamoto<sup>1</sup>, Aimi Suzuki<sup>1</sup>, Tetsuo Ogawa<sup>2</sup>, Mika Senuma<sup>3</sup>, Makiko Kuwagata<sup>3</sup> (<sup>1</sup>Fac. Pharmaceut. Sci., Ohu Univ., <sup>2</sup>Fac. Medicine, Saitama Medical Univ., <sup>3</sup>Laboratory of Safety Evaluation, Hatano Research Institute, Food and Drug Safety Center)

## From Korea

**P-105    Platycodin D prevent TGF- $\beta$ 1-induced activity and proliferation of hepatic stellate cells via inhibiting the Smad signaling pathway**

Gi Ho Lee, Tuyet Ngan Thai and Hye Gwang Jeong (College of Pharmacy, Chungnam National University, Daejeon, Republic of Korea)

**P-106    Thymoquinone induces apoptosis through ROS-mediated inhibition of Src/STAT3 signaling pathway in human melanoma cell**

○ Hui Seong Lee<sup>1</sup>, Kyung-Soo Chun<sup>1</sup> (<sup>1</sup>College of Pharmacy, Keimyung University, Daegu 42601, Republic of Korea)

**P-107    First large-scale proteomics analysis of lysine crotonylation in *Danio rerio* embryos**

○ Oh Kwang Kwon, Sunjoo Kim, Sangkyu Lee (BK21 Plus KNU Multi-Omics based Creative Drug Research Team, College of Pharmacy, Kyungpook National University, Daegu, Republic of Korea)

**P-108    Deep secretome profiling of PC-3/nkR cells, the novel high-aggressive prostate cancer sub cell-line of PC-3**

○ Ju Mi Jeon<sup>1</sup>, Oh Kwang Kwon<sup>1</sup>, Sung Su Yea<sup>2</sup>, Sangkyu Lee<sup>1</sup> (<sup>1</sup>BK21 Plus KNU Multi-Omics based Creative Drug Research Team, College of Pharmacy, Research Institute of Pharmaceutical Sciences, Kyungpook National University, Daegu, Republic of Korea, <sup>2</sup>Department of Biochemistry, College of Medicine, Inje University, Busan, Republic of Korea)

**P-109    Investigation of Korean red ginseng extract-induced drug interaction to prevent adverse effect in over dose administration**

○ Pil Joung Cho<sup>1</sup>, Riya Shrestha<sup>1</sup>, Sanjita Paudel<sup>1</sup>, Kyu Min Kim<sup>2</sup>, Sung Hwan Ki<sup>2</sup>, Sangkyu Lee<sup>1</sup> (<sup>1</sup>BK21 Plus KNU Multi-Omics based Creative Drug Research Team, College of Pharmacy and Research Institute of Pharmaceutical Sciences, Kyungpook National University, Daegu, Republic of Korea, <sup>2</sup>College of Pharmacy, Chosun University, Gwangju, Republic of Korea)

**P-110    Effect of Platycodin D on mitochondrial biogenesis via PKA-CREB-PGC-1 $\alpha$  signaling pathway in human endothelial cells.**

Se Jong Kim, Sun Woo Jin and Hye Gwang Jeong (College of Pharmacy, Chungnam National University, Daejeon, Republic of Korea)

**P-111    Gene expression analysis in rat lungs after intratracheal exposure to polyhexamethyleneguanidine**

Sun Woo Jin, Gi Ho Lee, Hye-Gwang Jeong (College of Pharmacy, Chungnam National University, Daejeon, Republic of Korea)

- P-112 E6AP induction by microRNA-302c dysregulation prohibits TGF- $\beta$ -mediated fibrogenesis in hepatic stellate cells**  
Sung Hwan Ki (College of Pharmacy, Chosun University, Gwangju 61452, Republic of Korea)
- P-113 Capsaicin inhibits TGF- $\beta$ -induced epithelial–mesenchymal Transition and migration in human lung carcinoma A549 cells via PI3K/Akt, ERK1/2 and Smad2/3 Pathway in Human Lung Carcinoma A549 Cells**  
Thi Hoa Pham, Tuyet Ngan Thai, Sun woo Jin, Hye Gwang Jeong (College of Pharmacy, Chungnam National University, Daejeon, Republic of Korea)
- P-114 TLR7 signaling promotes non-alcoholic steatohepatitis by inhibiting regulatory T cells in mice**  
○ Yoon Seok Roh<sup>1</sup>, Changho Shon<sup>1</sup>, Jong Won Kim<sup>2</sup>, Surim Park<sup>2</sup>, Sokho Kim<sup>2</sup>, Seong Kug Eo<sup>2</sup>, Jung Kee Kwon<sup>2</sup>, Chae Woong Lim<sup>2</sup>, and Bumseok Kim<sup>2</sup> (<sup>1</sup>Dep. Phar., College of Phar. Med. Res. Center., Chungbuk National Univ., <sup>2</sup>Biosafety Res. Inst., College of Vet. Med. (BK21 Plus Program), Chonbuk National Univ.)
- P-115 Dual-specificity phosphatase 5 alleviates inflammatory responses by inhibiting the ERK and NF- $\kappa$ B signaling pathways**  
○ Young-Chang Cho<sup>1</sup> (<sup>1</sup>College of Pharmacy, Chonnam National University)
- P-117 Estrogen ameliorates thioacetamide-induced hepatic fibrosis**  
○ Yong Hee Lee, Kyeung Seok Kim, Hyung Sik Kim (School of Pharmacy, Sungkyunkwan University, Serobu-ro, 2066, Suwon, Republic of Korea)
- P-118 Proteomic identification of urinary biomarkers of diabetic nephropathy**  
○ Ji Yeon Son, Kyeung Seok Kim, Hyung Sik Kim (School of Pharmacy, Sungkyunkwan University, Serobu-ro, 2066, Suwon, Republic of Korea)

## **Banquet**

September 10 (Mon) 18:30 ~ 20:30

Site : Leoplaza Hotel

**Scientific Award Ceremony**

**Kanehara Award Ceremony**

**Presentation of Young Investigator Award Winners and Conferment Ceremony**

**Presentation of Candidates for Rookies of Year Award Winners and Conferment Ceremony**

**Presentation of Chief Organizer Award Winners and Conferment Ceremony**

**2018 Japan/Korea Joint Symposium on Pharmaceutical Health Science and**

**Environmental Toxicology · Best Poster Award Winners and Conferment Ceremony**