

## Plenary Lecture I

August 30 (Tue) 14:50-15:50 Room A

Chair: Shogo Misumi (Grad. Sch. Pharm. Sci., Kumamoto Univ.)

***PL-1* Are we prepared for next pandemic zoonosis? - Influenza as a typical example -**

○ Hiroshi Kida

(International Institute for Zoonosis Control, Hokkaido University)

## Plenary Lecture II

August 31 (Wed) 11:10-12:10 Room A

Chair: Shogo Misumi (Grad. Sch. Pharm. Sci., Kumamoto Univ.)

***PL-2* Challenge environmental problems by taking advantage of strategies and methods educated in hygienic chemistry: Elucidation of adaptive response and protection against electrophilic stress**

○ Yoshito Kumagai

(Univ. of Tsukuba)

## Award Lectures

### Scientific Award

August 31 (Wed) 13:10-13:40 Room A

Chair: Naoto Oku (Fac. Pharm. Sci., Teikyo Univ.)

***ALI-1* Molecular toxicology of methylmercury and phytoremediation of toxic metals for our health.**

○ Masako Kiyono

(Sch. Pharm. Sci., Kitasato Univ.)

August 31 (Wed) 13:40-14:10 Room A

Chair: Shigeru Ohta (Sch. Pharm. Sci., Wakayama Med. Univ.)

***ALI-2* Molecular toxicology studies for chemical assessment and elucidation of neurodegenerative diseases**

○ Yaichiro Kotake

(Grad. Sch. of Biomed. Sci., Hiroshima Univ.)

## **Kanehara Award**

August 31 (Wed) 14:10-14:30 Room A

Chair: Yoshito Kumagai (Univ. of Tsukuba)

***AL-2* Cellular response to ubiquitous chemicals with high reactivity in the environment and their regulation system by sulfane sulfur**

○ Yumi Abiko

(Grad. Sch. Biomed. Sci., Nagasaki Univ.)

## **Forum I : New Trends in DOHaD Research - From Environmental Factors to Disease Risk**

August 30 (Tue) 9:00-11:00 Room A

Organizer / Chair: Yasunari Kanda (NIHS)

Kimie Nakagawa (Fac. Pharm. Sci., Kobe Gakuin Univ.)

***F1-1* Neuropsychiatric disorders in a DOHaD perspective**

○ Kenji J. Tsuchiya<sup>1,2</sup>

(<sup>1</sup>Hamamatsu Univ. Sch. Med., <sup>2</sup>United Grad. Sch. Child Dev., Osaka Univ)

***F1-2* Nutritional, Metabolites and External Factors Involved in Fetal Neurodevelopmental Disorders**

○ Hideko Sone

(Grad. School Pharm. Sci., Yokohama Univ. Pharm.)

***F1-3* Importance of Maternal and Fetal/Newborn Vitamin D and Vitamin K Nutrition**

○ Kimie Nakagawa

(Lab. Hygienic Sci., Fac. Pharm. Sci., Kobe Gakuin Univ.)

***F1-4* Hypothyroidism and DOHaD: Aiming for the risk assessment of neurodevelopmental disorders in offspring.**

○ Keishi Ishida, Daisuke Matsumaru, Tsuyoshi Nakanishi

(Gifu Pharm. Univ.)

***F1-5* Development of neurotoxicity testing via thyroid hormone signaling using iPSC cells**

○ Yasunari Kanda

(Div. Pharmacol., NIHS)

## **Forum II : Toward post-corona future society-Protecting the public from emerging infectious diseases**

August 30 (Tue) 16:00-18:00 Room A

Organizer / Chair: Shogo Misumi (Grad. Sch. Pharm. Sci., Kumamoto Univ.)

**F2-1 Infectious diseases new age: Can human beings overcome infectious diseases?**

○ Shuzo Matsushita

(Joint Research Center for Human Retrovirus Infection, Kumamoto University)

**F2-2 Viral pathogenesis caused by human T-cell leukemia virus type 1**

○ Yorifumi Satou

(Joint Research Center for Human Retrovirus Infection, Kumamoto Univ)

**F2-3 Endogenous factors affecting adverse reactions of vaccines**

○ Hiroyuki Oshiumi<sup>1</sup>, Momoka Nakashima<sup>2</sup>, Yusuke Miyashita<sup>2</sup>, Kana Ishikawa<sup>2</sup>, Masaaki Okamoto<sup>2</sup>

(<sup>1</sup>Fac. Life. Sci., Kumamoto Univ, <sup>2</sup>Grad. Sch. Med. Sci. Kumamoto Univ.)

**F2-4 Issues of COVID-19 vaccination from the viewpoint of public health ethics**

○ Hideyuki Yahata

(Grad. Sch. Educ., Kumamoto Univ.)

## **Forum III : Advanced study on living environment for health promotion**

August 31 (Wed) 9:00-11:00 Room A

Organizer / Chair: Naohito Kawasaki (Fac. Pharm., Kindai. Univ.)

Tsuyoshi Nakanishi (Gifu Pharm. Univ)

**F3-1 Occurrence of pharmaceuticals in medical wastewater and development of treatment methods**

○ Takashi Azuma

(Fac. Pharm., Osaka Med. Pharm. Univ.)

**F3-2 Clarification of Water Pollution Mechanisms and Future Prediction in Lake Biwa Using the Hydrological and Material Cycle Simulation Model**

○ Yuichi Sato

(Lake Biwa Env. Res. Inst.)

**F3-3 Evaluation of toxicological effects of environmental medicines on aquatic animals**  
○ Masashi Sekimoto<sup>1</sup>, Kumi Matsui<sup>2</sup>, Kazuhiko Nakano<sup>1</sup>, Akihide Itoh<sup>2</sup>  
(<sup>1</sup>Sch. Life Environ. Sci., Azabu Univ., <sup>2</sup>Sch. Vet. Med., Azabu Univ.)

**F3-4 Analysis of polycyclic aromatic hydrocarbon quinones in particulate matters (PM) from atmosphere and combustion sources and their contribution to PM oxidative potentials.**  
○ Akira Toriba  
(Graduate School of Biomedical Sciences, Nagasaki University)

## **Forum IV : Basic and clinical studies of Minamata Disease up-to-date**

August 31 (Wed) 14:50-16:50 Room A

Organizer / Chair: Noriyuki Suzuki (Grad. Sch. Pharm. Sci., Chiba Univ.)

Yasukazu Takanezawa (Sch. Pharm., Kitasato Univ.)

**F4-1 Toxicity and toxicokinetics of methylmercury under pathophysiology of glucose metabolism disorders**  
○ Megumi Yamamoto  
(Dep. Int. Affairs & Res., Natl. Inst. Minamata Dis.)

**F4-2 Mechanistic study of antagonistic interaction between mercury and selenium compounds**  
○ Noriyuki Suzuki<sup>1</sup>, Natsumi Kurihara<sup>2</sup>, Soma Sakakura<sup>2</sup>, Yu-ki Tanaka<sup>1</sup>,  
Yasunori Fukumoto<sup>1</sup> and Yasumitsu Ogra<sup>1</sup>  
(<sup>1</sup>Grad. Sch. Pharm. Sci., Chiba Univ. <sup>2</sup> Fac. Pharm. Sci., Chiba Univ.)

**F4-3 The role of autophagy receptor p62 and NBR1 against methylmercury-induced cytotoxicity**  
○ Yasukazu Takanezawa, Masako Kiyono  
(Dept. of Public Health, School of Pharmacy, Kitasato Univ.)

**F4-4 Repetitive Transcranial Magnetic Stimulation (rTMS) for Chronic Minamata Disease**  
○ Masaaki Nakamura  
(Dep. Clinical Medicine, Natl. Inst. Minamata Dis.)

## **2022 Japan/Korea Joint Symposium on Pharmaceutical Health Science and Environmental Toxicology**

August 30 (Tue) 11:40-12:40 Room A

Chair: Jin-yong Lee (Aichi Gakuin University, Japan)

Eun-Young Lee (Mokpo National University, Republic of Korea)

***S-1* Arsenic may act as a pro-metastatic carcinogen through promoting tumor cell-induced platelet aggregation**

○ Keunyoung Kim

(College of Pharmacy, Kangwon National University, Korea)

***S-2* Prediction of inhalation toxicity using in vitro systems**

○ Ha Ryong Kim

(College of Pharmacy, Daegu Catholic University)

***S-3* Toxicological significance of sulfane sulfur in defense against electrophilic stress**

○ Yasuhiro Shinkai

(Faculty of Medicine, University of Tsukuba)

***S-4* Challenge to elucidate critical windows of susceptibility: Temporal trends in elemental exposure of each individual**

○ Miyuki Iwai-Shimada, Shoji F. Nakayama

(National Institute for Environmental Studies)

## **2022 Japan/Korea Joint Symposium on Pharmaceutical Health Science and Environmental Toxicology : Poster Session**

August 30 (Tue) 13:50-14:40 Room C

***PS-01* Role of acyl-CoA synthetase long-chain family member 4 in colorectal carcinogenesis**

○ Tsubasa Ochiai, Hiroshi Kuwata, Shuntaro Hara

(Sch. of Pharm., Showa Univ.)

***PS-02* NUBPL inhibits epithelial-mesenchymal transition and metastasis in colon cancer cells**

○ Da-Young Lee, Moon-Young Song, and Eun-Hee Kim

(College of Pharmacy and Institute of Pharmaceutical Sciences, CHA University)

- PS-03 Mechanism of species differences in phenobarbital/CAR-dependent liver tumor promotion**  
 ○ Natsuki Makida, Ryota Shizu, Keiichiro Sobe, Takuomi Hosaka, Yuichiro Kanno, Takamitsu Sasaki, Kouichi Yoshinari  
 (Sch. Pharm. Sci., Univ. Shizuoka)
- PS-04 Identification of function and signaling pathways of GLUT3 in colorectal cancer**  
 ○ Moon-Young Song, Da-Young Lee, Young-Min Han, Eun-Hee Kim  
 (College of pharmacy, CHA Univ.)
- PS-05 Anticancer effect of fisetin on colorectal cancer organoid-derived xenograft model**  
 ○ Nayun Kim<sup>1,2</sup>, Junhye Kwon<sup>3,4</sup>, Ui Sup Shin<sup>3,4</sup>, Joohee Jung<sup>1,2\*</sup>  
 (<sup>1</sup>Duksung IDC, Duksung Women's Univ., <sup>2</sup>Coll. Pharm., Duksung Women's Univ., <sup>3</sup>Dep. Radiol. Clinic. Res., Korea Cancer Center Hospital, <sup>4</sup>KIRAMS)
- PS-06 Antioxidative activity of human serum albumin via supersulfides**  
 ○ Mayumi Ikeda<sup>1,2</sup>, Yasunori Iwao<sup>1</sup>, Yu Ishima<sup>2</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Wakayama Medical Univ, <sup>2</sup>Fac. Pharm. Sci., Tokushima Univ.)
- PS-07 Quantitative proteomics approach to identify the potential biomarkers in renal cell carcinoma**  
 ○ Juhee Park<sup>1</sup>, Ann-yae Na<sup>1</sup>, Hyoje Jo<sup>1</sup>, Hyunchae Sim<sup>1</sup>, So-Young Choi<sup>1,2</sup>, Sangkyu Lee<sup>1,2</sup>  
 (<sup>1</sup>College of pharmacy, Kyungpook National University., <sup>2</sup>Mass Spectrometry Convergence Research Center, Kyungpook National University.)
- PS-08 Apoptotic effect of the DRD2 antagonist, domperidone, via inactivation of ERK/STAT3 signaling pathway in colon cancer HCT116 cells**  
 ○ So Jin Sim, Kyung-Soo Chun  
 (College of Pharmacy, Keimyung University, Daegu 42601, Republic of Korea)
- PS-09 Loss of function by mutant GPx4 induce metaphyseal dysplasia**  
 ○ Kahori Tsuruta<sup>1</sup>, Mayu Ohta<sup>1</sup>, Isaku Tanabe<sup>1</sup>, Masaki Matsuoka<sup>1</sup>, Zheng Wang<sup>2</sup>, Long Gou<sup>2</sup>, Shiro Ikegawa<sup>2</sup>, Hiroataka Imai<sup>1</sup>  
 (<sup>1</sup>Sch.Pharm.Sci. Kitasato Univ., <sup>2</sup>Lab. Bone and Joint Diseases, RIKEN)
- PS-10 Role of estrogen receptor alpha 36 in cell proliferation and migration via aromatase expression in triple negative breast cancer cells**  
 ○ Gi Ho Lee, Seung Yeon Lee, Ju Yeon Chae, Jae Won Kim, Hye Gwang Jeong  
 (Department of Toxicology, College of Pharmacy, Chungnam National University, Daejeon, Republic of Korea.)

- PS-11 5F-ADB-PINACA, a synthetic cannabinoid, elicits behavioral response by Cannabinoid 1 receptor-dependent manner: a time frame study**  
 ○ Jorge Carlos Pineda Garcia<sup>1</sup>, Ren-shi Li<sup>1,2</sup>, Ruri Kikura-Hanajiri<sup>3</sup>, Yoshitaka Tanaka<sup>1</sup>, Yuji Ishii<sup>1</sup>  
 (<sup>1</sup>Grad. Sch. Pharm. Sci., Kyushu Univ., <sup>2</sup>China Pharm. Univ., <sup>3</sup>National Institute of Health Sciences, Japan)
- PS-12 Chrysin suppresses tumor growth in pancreatic cancer via activating the G protein-coupled estrogen receptor**  
 ○ Hee Jung Kwon<sup>1,2</sup>, Hyun Kyung Lim<sup>1,2</sup>, Ga Seul Lee<sup>3,4</sup>, Jeong Hee Moon<sup>4</sup>, Joohee Jung<sup>1,2\*</sup>  
 (<sup>1</sup>Duksung IDC, Duksung Women's Univ., <sup>2</sup>Coll. Pharm., Duksung Women's Univ., <sup>3</sup>Coll. Pharm., Chungbuk Nat. Univ., <sup>4</sup>Disease Target Structure Res. Cent., KRIBB)
- PS-13 Significance of maternal catecholamines for the placental development through the regulation of proteoglycans**  
 ○ Koji Teramoto, Yuhki Ikemoto, Sayaka Nakamae, Mari Kondo, Hirofumi Hohjoh, Hiroshi Hasegawa  
 (Lab. Hygienic. Sci., Kobe Pharm. Univ.)
- PS-14 Phillyrin attenuates gluconeogenesis through the LKB1/AMPK/HDAC5 and Akt/FOXO1 signaling pathway in insulin resistant HepG2 cells**  
 ○ Seung Yeon Lee, Gi Ho Lee, Mi Yeon Lee, Ju Yeon Chae, Jae Won Kim, Hye Gwang Jeong  
 (Department of Toxicology, College of Pharmacy, Chungnam National University, Daejeon, Republic of Korea.)
- PS-15 Metabolic activities of aldehyde volatile organic compounds in olfactory epithelium and nasal mucus**  
 ○ Naoki Takaoka<sup>1,2</sup>, Seigo Sanoh<sup>1,2</sup>, Yaichiro Kotake<sup>2</sup>, Mariam Esmaceli<sup>3</sup>, Silke Leimkühler<sup>3</sup>, Mami Kurosaki<sup>4</sup>, Mineko Terao<sup>4</sup>, Enrico Garattini<sup>4</sup>, Hideki Sakatani<sup>5</sup>, Daichi Murakami<sup>5</sup>, Masamitsu Kono<sup>5</sup>, Muneki Hotomi<sup>5</sup>, Shigeru Ohta<sup>1,2</sup>  
 (<sup>1</sup>Sch. Pharm. Sci, Wakayama Med. Univ, <sup>2</sup>Grad. Sch. Biomed. Health Sci., Hiroshima Univ, <sup>3</sup>Univ. of Potsdam, <sup>4</sup>Institute di Ricerche Farmacologie Mario Negri, <sup>5</sup>Sch. Med., Wakayama Med. Univ)
- PS-16 Quantitative proteomic analysis in zebrafish larvae exposed to perfluorobutanesulfonic acid**  
 ○ Hyunhae Sim<sup>1</sup>, Eunji Sung<sup>1</sup>, Honghao Bai<sup>1</sup>, Eun Ki Min<sup>2</sup>, Ki-Tae Kim<sup>2\*</sup>, Sangkyu Lee<sup>1\*</sup>  
 (<sup>1</sup>College of Pharmacy, Kyungpook National University, <sup>2</sup>Department of Environmental Engineering, Seoul National University of Science and Technology)

- PS-17 Analysis of the role of acyl-CoA synthetase long-chain family member 4 in paraquat-induced pulmonary toxicity**  
 ○ Yuki Tomitsuka, Hiroshi Kuwata, Shuntaro Hara  
 (Sch. of Pharmacy, Showa Univ.)
- PS-18 Evaluation of skin irritation of acids commonly used in cleaners in 3D reconstructed human epidermis model, KeraSkin™**  
 ○ Jee-hyun Hwang<sup>1</sup>, Seungmi Lee<sup>1</sup>, Ho Geon Lee<sup>2</sup>, Dalwoong Choi<sup>2</sup> and Kyung-Min Lim<sup>1,\*</sup>  
 (<sup>1</sup>College of Pharmacy, Ewha Womans University, Seoul 03760, Republic of Korea, <sup>2</sup>Transdisciplinary Major in Learning Health Systems, Department of Health and Safety Convergence Science, Korea University, Seoul 02481, Republic of Korea)
- PS-19 Elucidation of novel roles of NBR1 in oxidative stress-induced cell death parthanatos**  
 ○ Wakana Suzuki, Midori Suzuki, Yusuke Hirata, Takuya Noguchi, Atsushi Matsuzawa  
 (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- PS-20 Protective effect of puerarin on hepatic steatosis via G-protein-coupled estrogen receptor- mediated calcium/AMPK signaling pathway**  
 ○ Mi Yeon Lee<sup>1</sup>, Gi Ho Lee<sup>1</sup>, Thi Hoa Pham<sup>1</sup>, Seung Yeon Lee<sup>1</sup>, Nam Doo Kim<sup>2</sup>, Eun Hee Han<sup>3</sup>, Hye Gwang Jeong<sup>1</sup>  
 (<sup>1</sup>Department of Toxicology, College of Pharmacy, Chungnam National University, Daejeon, Republic of Korea, <sup>2</sup>VORONOI BIO Inc., Incheon, Republic of Korea, <sup>3</sup>Drug & Disease Target Research Team, Division of Bioconvergence Analysis, Korea Basic Science Institute (KBSI), Cheongju, Republic of Korea.)
- PS-21 Dihydropyrazine suppresses TLR4-dependent inflammatory responses *in vivo***  
 ○ Madoka Sawai<sup>1</sup>, Shunji Itoh<sup>2</sup>, Masaki Yoshida<sup>3</sup>, Jian-Rong Zhou<sup>4</sup>, Yutaka Tatano<sup>1</sup>, Yuu Miyauchi<sup>4</sup>, Takumi Ishida<sup>1</sup>, Shinji Takechi<sup>4</sup>  
 (<sup>1</sup>Sch. Pharm., at Fukuoka. Int. Univ. Health & Welfare., <sup>2</sup>Dept. Health Sci., Grad. Sch. Health Sci., Kansai Univ. Health Sci., <sup>3</sup>Sch. Biosci. Biotech., TUT., <sup>4</sup>Fac. Pharmaceut. Sci., Sojo Univ.)
- PS-22 Mixture of chloromethylisothiazolinone/methylisothiazolinone (CMIT/MIT) induced the barrier dysfunction via mitochondrial bioenergetic disturbance and dynamic imbalance in brain endothelial cell lines and rat cerebrovascular endothelium**  
 ○ Donghyun Kim, Yusun Shin, Ok-Nam Bae,\*  
 (College of Pharmacy Institute of Pharmaceutical Science and Technology, Hanyang University)



- PS-23**    **Decrease of selenium-supply activity of selenoprotein P in inflammatory M1 macrophage**  
○ Mayumi Sugawara<sup>1</sup>, Kotoko Arisawa<sup>2</sup>, Yoshiro Saito<sup>2</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Tohoku Univ, <sup>2</sup>Grad. Sch. Pharm. Sci., Tohoku Univ)
- PS-24**    **Polyhexamethylene guanidine phosphate, a humidifier disinfectant, can induce pro-coagulant activity of red blood cells via phosphatidylserine exposure**  
○ Sungbin Choi and Ok-Nam Bae,\*  
(College of Pharmacy, Hanyang University, Ansan, Gyeonggi-do, South Korea)
- PS-25**    **Elucidation of the novel mechanisms by which surfactants initiate pro-inflammatory responses**  
○ Maoko Tan, Tomohiro Kagi, Yusuke Hirata, Takuya Noguchi, and Atsushi Matsuzawa  
(Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- PS-26**    **Tributyltin accumulates LC3-II via lysosomal dysfunction**  
○ Shunichi Hatamiya, Masatsugu Miyara, Yaichiro Kotake  
(Grad. Sch. of Biomed. and Health Sci., Hiroshima Univ.)
- PS-27**    **Protective effect of dendropanoxide on cadmium-induced hepatotoxicity in Spradue-Dawly rats**  
○ Gali Sreevarsha, Swati Sharma, Eunah Lee, Minjeong Jeon, Joo Hee Han, Joo Kyung Shin, So Young Kyung, Ha Eun Lee, Hae Eun Park, Ji Won Park, Tian Zheng, Chun Xue Jiang, Ju Ri Kim, Yeon Su Park, Yun Moon Oh, Ji Sun Lee, Jae Hyun Park, Hyung Sik Kim  
(School of Pharmacy, Sungkyunkwan Univ., Suwon, Korea)
- PS-28**    **Significance of reactive sulfur species in protecting against disturbance of selenium metabolism induced by methylmercury.**  
○ Runa Kudo, Ayako Mizuno, Takashi Toyama, Yoshiro Saito  
(Grad. Sch. Pharm. Sci., Tohoku Univ.)

## Award Candidates Presentation

### Candidates for Young Investigator Award

August 30 (Tue) 9:00-10:35 Room B

Chair: Yaichiro Kotake (Grad. Sch. of Biomed. Sci., Hiroshima Univ.)

**P-006 Super sulfide can release Se-mercuration of selenoprotein P and recover its selenium supply function.**

○ Runa Kudo, Ayako Mizuno, Takashi Toyama, Yoshiro Saito  
(Grad. Sch. Pharm. Sci., Tohoku Univ.)

**P-042 Elucidation of novel roles of NBR1 in oxidative stress-induced cell death “parthanatos”**

○ Wakana Suzuki, Midori Suzuki, Yusuke Hirata, Takuya Noguchi, Atsushi Matsuzawa  
(Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

**P-045 Molecular Mechanisms of Viral Infection-Dependent Decrease of Antiviral Immune Responses in a Chronic Obstructive Pulmonary Disease Model**

○ Megumi Hayashi<sup>1</sup>, Noriki Takahashi<sup>1,2</sup>, Tomoki Kishimoto<sup>1</sup>, Ayami Fukuyama<sup>1</sup>, Choyo Ogasawara<sup>1</sup>, Keiko Shuto<sup>3</sup>, Mary Ann Suico<sup>1</sup>, Hirofumi Kai<sup>1</sup>, Tsuyoshi Shuto<sup>1</sup>  
(<sup>1</sup>Molecular Medicine, Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>HIGO program, <sup>3</sup>Fac. Pharm. Sci., Sojo Univ.)

**P-049 Excess supersulfide is exported through cystine-dependent antiporters**

○ Hanako Aoki<sup>1</sup>, Masahiro Akiyama<sup>2,3</sup>, Takamitsu Unoki<sup>2,4</sup>, Eiji Warabi<sup>1,2</sup>, Akiyuki Nishimura<sup>5</sup>, Motohiro Nishida<sup>5,6</sup>, Yoshito Kumagai<sup>1,2</sup>  
(<sup>1</sup>Grad. Sch. Med Sci., Tsukuba Univ., <sup>2</sup>Fac. Medicine., Tsukuba Univ., <sup>3</sup>Fac. Pharm., Keio Univ., <sup>4</sup>Dept. Basic Med. Sci., Nat. Inst. Minamata Dis., <sup>5</sup>Div. Cardiac Signal., Nat. Inst. Phys. Sci., <sup>6</sup>Grad. Sch. Pharm. Sci., Kyushu Univ.)

**P-056 Heterodimerization and functional association of prostanoid EP3 and FP receptors**

○ Takashima Ryusei, Yuki Hirai, Toshiko Sugimoto, Tomoaki Inazumi, Soken Tsuchiya, Yukihiko Sugimoto  
(Department of Pharmaceutical Biochemistry, Graduate School of Pharmaceutical Sciences, Kumamoto University)

**P-060 The effect of deficiency of acyl-CoA synthetase long chain family member (ACSL) 4 in paraquat- induce lung injury**

○ Yuki Tomitsuka, Hiroshi Kuwata, Shuntaro Hara  
(Sch. of pharmacy, Showa Univ.)

- P-064** **BMAL1, a core component of the circadian clock system, regulates the browning of white adipocytes in mice**  
○ Hirotake Ishii, Satoshi Kitaura, Yukiko Takasugi, Taira Wada, Shigeki Shimba  
(Sch. Pharm., Nihon Univ.)
- P-065** **Discovery of a protein to regenerate growth inhibitory factor/metallothionein-3 (GIF/MT3)**  
○ Souma Hitomi<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-071** **Generation and phenotypic analysis of GPx4 amino acid mutant mice (human metaphyseal dysplasia model)**  
○ Isaku Tanabe, Mayu Ota, Kahori Tsuruta, Hirotaka Imai  
(Sch. Pharm. Sci., Kitasato Univ.)
- P-072** **Nucleoside antimetabolite/analog induced iron independent lipid peroxidation derived novel cell death, lipoxytosis**  
○ Ayaka Enomoto, Mumu Ito, Saki Tsukuda, Emi Ono, Kahori Tsuruta, Hirotaka Imai  
(Grad. Sch. Pharm. Sci., Kitasato Univ.)

## Award Candidates Presentation

### Candidates for Rookie of the Year Award

August 30 (Tue) 10:40-11:30 Room B

Chair: Hitomi Fujishiro (Fac. Pharm. Sci., Tokushima Bunri Univ.)

- P-011 Effect of cadmium on hyaluronan synthesis in cultured vascular endothelial cells**  
○ Misaki Shirai<sup>1</sup>, Takato Hara<sup>1</sup>, Toshiyuki Kaji<sup>2</sup>, Chika Yamamoto<sup>1</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Toho Univ, <sup>2</sup> Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-016 Isolation of several strains of selenium-metabolizing enterobacteria and elucidation of their selenium metabolism**  
○ Sakie Horiai<sup>1</sup>, Kazuaki Takahashi<sup>2</sup> and Yasumitsu Ogra<sup>3</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Chiba Univ., <sup>2</sup>Grad. Sch. Horticulture, Chiba Univ., <sup>3</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)
- P-027 Analysis of effects of the tea ricemalt ingredient on the improvement of the male infertility**  
○ Mahiro Nakata<sup>1</sup>, Tomoko Koumura<sup>1</sup>, Kumiko Hioki<sup>2</sup>, Bunsei Yamamoto<sup>2</sup>, Masahiro Yamamoto<sup>2</sup>, Hiroataka Imai<sup>1</sup>  
(<sup>1</sup>Sch. of Pharm. Sci., Kitasato Univ., <sup>2</sup> Biogenkoji Research Institute Co.,Ltd)
- P-030 Mechanism of species differences in phenobarbital/CAR-dependent liver tumor promotion**  
○ Natsuki Makida, Ryota Shizu, Keiichiro Sobe, Takuomi Hosaka, Yuichiro Kanno, Takamitsu Sasaki, Kouichi Yoshinari  
(Sch. Pharm. Sci., Univ. Shizuoka)
- P-031 Effect of phosphorylation of HIV capsid protein on core formation**  
○ Tamae Hirano<sup>1</sup>, Naoki Kishimoto<sup>1</sup>, Ayaka Irie<sup>1</sup>, Nobutoki Takamune<sup>2</sup>, Shogo Misumi<sup>1</sup>  
(<sup>1</sup>Sch. Pharm, Kumamoto Univ, <sup>2</sup>KIDO.)
- P-044 Decrease of selenium-supply activity of selenoprotein P in inflammatory M1 macrophage**  
○ Mayumi Sugawara<sup>1</sup>, Kotoko Arisawa<sup>2</sup>, Yoshiro Saito<sup>2</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Tohoku Univ, <sup>2</sup>Grad. Sch. Pharm. Sci., Tohoku Univ)
- P-066 Functional analysis of vitamin K converting enzymes UBIAD1 and Menaquinone-4 in chondrocytes**  
○ Shinichiro Kaetsu<sup>1</sup>, Shunsuke Hirashima<sup>2</sup>, Yukino Kiyooka<sup>1</sup>, Kimie Nakagawa<sup>1,2</sup>  
(<sup>1</sup> Fac. Pharm. Sci., Kobegakuin Univ, <sup>2</sup> Grad. Sch. Pharm. Sci., Kobegakuin Univ.)

**P-089 A single amino acid mutation in the *Mytilus galloprovincialis* Retinoid X receptor affected its ligand specificity**

○ Ryoichi Tsutsui<sup>1</sup>, Youhei Hiromori<sup>1,2</sup>, Keishi Ishida<sup>1</sup>, Daisuke Matsumaru<sup>1</sup>, Hisamitsu Nagase<sup>1,3</sup>, Minoru Hamada<sup>4</sup>, Takeshi Kikuta<sup>4</sup>, Yasuyuki Nogata<sup>5</sup>, Tsuyoshi Nakanishi<sup>1</sup>

(<sup>1</sup>Gifu Pharm. Univ., <sup>2</sup> Fac. Pharm. Sci., Suzuka Med. Sci. Univ., <sup>3</sup> Fac. Pharm. Sci., Gifu Univ. of Med. Sci., <sup>4</sup>Chubu Electric Power Co., Inc., <sup>5</sup>Central Research Institute of Electric Power Industry.)

## Oral Session 1

August 30 (Tue) 16:00-17:00 Room B

Chair: Yuji Ishii (Grad. Sch. Pharm. Sci., Kyushu Univ.)

Shigeki Shimba (Sch. Pharm., Nihon Univ.)

- 01-1 Mechanism of cardiomyocytes aging by exposure to cigarette sidestream smoke**  
○ Xiaokang Tang<sup>1,2</sup>, Akiyuki Nishimura<sup>1</sup>, Kazuhiro Nishimura<sup>3</sup>, Yuri Kato<sup>3</sup>,  
Yuko Ibuki<sup>4</sup>, Takaaki Akaike<sup>5</sup>, Yoshito Kumagai<sup>6</sup>, Motohiro Nishida<sup>1,3</sup>  
(<sup>1</sup>Dep. Cardio. Sign. NIPS, <sup>2</sup>Dep. Physio. Sci., SOKENDAI. <sup>3</sup>Grad. Sch. Pharm Sci.,  
Kyushu Univ, <sup>4</sup>Grad. Div. Foo. Nutri. Sci., Shizuoka Univ, <sup>5</sup>Grad. Sch. Med., Tohoku  
Univ, <sup>6</sup> Fac. Med., Tsukuba Univ.)
- 01-2 Recovery effects of aripiprazole on the low prolactin levels during lactation caused by gestational 2,3,7,8-tetrachlorodibenzo-*p*-dioxin exposure**  
○ Yuan Ming<sup>1</sup>, Tomoki Takeda<sup>1,2</sup>, Yoshitaka Tanaka<sup>1</sup>, Yuji Ishii<sup>1</sup>  
(<sup>1</sup>Grad Sch Pharmaceuti Sci., Kyushu Univ., <sup>2</sup>Japan Bioassay Research Center)
- 01-3 MBP, a metabolite of bisphenol A, promotes breast cancer cell malignancy through ERβ-GPER1 axis.**  
○ Masayo Hirao-Suzuki<sup>1</sup>, Masufumi Takiguchi<sup>1</sup>, Shuso Takeda<sup>2</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Hiroshima Intl. Univ., <sup>2</sup>Fac. Pharm. Sci., Fukuyama Univ.)
- 01-4 Role of Nrf2 in 1,2-dichloropropane-induced cell proliferation and DNA damage in liver of mice.**  
○ Yusuke Kimura<sup>1</sup>, Frederick Adams Ekuban<sup>1</sup>, Cai Zong<sup>1</sup>, Ken Itoh<sup>2</sup>,  
Masayuki Yamamoto<sup>3</sup>, Gaku Ichihara<sup>1</sup>  
(<sup>1</sup>Fac. Pharm., Tokyo Univ of Sci, <sup>2</sup>Grad. Sch. Med., Hirosaki University, <sup>3</sup>Grad. Sch.  
Med., Tohoku University)
- 01-5 Amplification of DNA replication stress by exposure to methylmercury**  
○ Dongyue Wang, Yasunori Fukumoto, Yuki Tanaka, Noriyuki Suzuki, Yasumitsu Ogra  
(Grad. Sch. Pharm. Sci., Chiba Univ.)

## Oral Session 2

August 30 (Tue) 17:00-18:00 Room B

Chair: Kotake Yaichiro (Grad. Sch. of Biomed. Sci., Hiroshima Univ.)

Toshiyuki Higuchi (Nihon Pharmaceutiacal Univ.)

### **O2-1 Role of maternal catecholamines in the regulation of placental polysaccharides**

○ Koji Teramoto, Yuhki Ikemoto, Sayaka Nakamae, Mari Kondo, Hirofumi Hohjoh, Hiroshi Hasegawa

(Lab. Hygienic. Sci., Kobe Pharm. Univ.)

### **O2-2 Metabolic activities of aldehyde volatile organic compounds in the olfactory epithelium and nasal mucus**

○ Naoki Takaoka<sup>1</sup>, Seigo Sanoh<sup>1</sup>, Yaichiro Kotake<sup>2</sup>, Mariam Esmaeeli<sup>3</sup>, Silke Leimkühler<sup>3</sup>, Mami Kurosaki<sup>4</sup>, Mineko Terao<sup>4</sup>, Enrico Garattini<sup>4</sup>, Hideki Sakatani<sup>5</sup>, Daichi Murakami<sup>5</sup>, Masamitsu Kono<sup>5</sup>, Muneki Hotomi<sup>5</sup>, Shigeru Ohta<sup>1</sup>

(<sup>1</sup>Sch. Pharm. Sci., Wakayama Med. Univ, <sup>2</sup>Grad. Sch. Biomed. Health Sci., Hiroshima Univ, <sup>3</sup>Univ. of Potsdam, <sup>4</sup>Institute di Ricerche Farmacologie Mario Negri, <sup>5</sup>Sch. Med., Wakayama Med. Univ)

### **O2-3 Changes in expression levels of Cytochrome P450s in the progress from NAFL to NASH**

○ Azusa Kawashima (Katagiri)<sup>1</sup>, Naoto Uramaru<sup>1,2</sup>, Makoto Osabe<sup>1,2</sup>, Toshiyuki Higuchi<sup>1,2</sup>

(<sup>1</sup>Grad. Sch. Pharm. Sci., Nihon Pharm. Univ., <sup>2</sup>Fac. Pharm. Sci., Nihon Pharm. Univ.)

### **O2-4 Subtilase cytotoxin from Shiga-toxigenic *Escherichia coli* impairs the inflammasome activation and exacerbates enteropathogenic bacterial infection**

○ Hiroyasu Tsutsuki<sup>1</sup>, Tianli Zhang<sup>1</sup>, Kinnosuke Yahiro<sup>2</sup>, Takaaki Akaike<sup>3</sup>, Tomohiro Sawa<sup>1</sup>

(<sup>1</sup>Dept. Microbiol., Grad. Sch. Med. Sci., Kumamoto Univ., <sup>2</sup>Dept. Microbiol. Infect. Cont. Sci, Kyoto Pharm. Univ., <sup>3</sup>Dept. Environ. Med. Mol. Toxicol., Tohoku Univ. Grad. Sch. Med.)

### **O2-5 Regulatory mechanism of NLRP3 inflammasome activation through protein S-polysulfidation**

○ Tianli Zhang<sup>1</sup>, Hiroyasu Tsutsuki<sup>1</sup>, Touya Toyomoto<sup>1</sup>, Akiyuki Nishimura<sup>2</sup>, Motohiro Nishida<sup>3</sup>, Takaaki Akaike<sup>4</sup>, Tomohiro Sawa<sup>1</sup>

(<sup>1</sup>Dept. Microbiol., Grad. Sch. Med. Sci., Kumamoto Univ., <sup>2</sup>Div. Card Signal., Natl Inst Physiol Sci., <sup>3</sup>Dept. Physiol., Grad. Sch. Pharm. Sci., Kyushu Univ., <sup>4</sup>Dept. Environ Med and Mol Toxicol., Tohoku Univ Grad. Sch. Med.)

## Oral Session 3

August 31 (Wed) 9:00-10:00 Room B

Chair: Hirotaka Imai (Sch.Pharm. Sci. Kitasato Univ. )

Motohiro Nishida (Grad. Sch. Pharm. Sci., Kyushu Univ.)

### **03-1 Structural study on nucleotide-binding of human oxidized nucleotide hydrolase**

○ Toshihiko Kourogi<sup>1</sup>, Kana Fujimiya<sup>2</sup>, Keisuke Hirata<sup>1</sup>, Mami Chirifu<sup>1</sup>,  
Shinji Ikemizu<sup>1</sup>, Yuriko Yamagata<sup>1,3</sup>, Teruya Nakamura<sup>1,4</sup>

(<sup>1</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ, <sup>2</sup>Fac. Pharm. Sci., Kumamoto Univ, <sup>3</sup>Shokei Univ, <sup>4</sup>Priority Organization for Innovation and Excellence, Kumamoto Univ)

### **03-2 Analysis of cell growth inhibition by nucleolar glutathione peroxidase 4**

○ Shu Yasuda<sup>1</sup>, Takara Hashimoto<sup>1</sup>, Takuma Kitajima<sup>1,2</sup>, Taro Sakamoto<sup>1</sup>,  
Takehiko Sasaki<sup>3</sup>, Hirotaka Imai<sup>1</sup>

(<sup>1</sup>Sch. of Pharm., Kitasato Univ., <sup>2</sup>Sch. of Sci., Kitasato Univ., <sup>3</sup>Med. Res. Ins., Grad. Sch. of Med. and Dent. Sci.)

### **03-3 Functional analysis of mutant GPx4 in metaphyseal dysplasia**

○ Kahori Tsuruta<sup>1</sup>, Mayu Ohta<sup>1</sup>, Isaku Tanabe<sup>1</sup>, Masaki Matsuoka<sup>1</sup>, Zheng Wang<sup>2</sup>,  
Long Gou<sup>2</sup>, Shiro Ikegawa<sup>2</sup>, Hirotaka Imai<sup>1</sup>

(<sup>1</sup>Sch.Pharm.Sci. Kitasato Univ., <sup>2</sup>Lab. Bone and Joint Diseases, RIKEN)

### **03-4 A uremic toxin indoxyl sulfate contributes to renal fibrosis via mTORC1**

○ Takehiro Nakano<sup>1</sup>, Hiroshi Watanabe<sup>1</sup>, Tadashi Imafuku<sup>1</sup>, Motoko Tanaka<sup>2</sup>,  
Kazutaka Matsushita<sup>2</sup>, Masafumi Fukagawa<sup>3</sup>, Hitoshi Maeda<sup>1</sup>, Toru Maruyama<sup>1</sup>

(<sup>1</sup> Grad. Sch. Pharm. Sci., Kumamoto Univ, <sup>2</sup> Akebono Clinic, <sup>3</sup> Tokai University School of Medicine.)

### **03-5 Functional elucidation of supersulfide in human hair**

○ Takeru Hirai, Hidenori Ando, Taro Shimizu, Tatsuhiro Ishida, Yu Ishima  
(Fac. Pharm. Sci., Tokushima Univ.)

## Oral Session 4

August 31 (Wed) 10:00-11:00 Room B

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

Yoshiro Saito (Grad. Sch. Pharm. Sci., Tohoku Univ.)

### **04-1 Regulation of cardiac baroreflex response by TRPC6-mediated Zn<sup>2+</sup> entry**

○ Reishin Okubo<sup>1</sup>, Sayaka Oda<sup>2</sup>, Kazuhiro Nishiyama<sup>1</sup>, Akiyuki Nishimura<sup>3</sup>,  
Yuri Kato<sup>1</sup>, Mi Xinya<sup>1</sup>, Motohiro Nishida<sup>1,2,3</sup>

(<sup>1</sup>Grad. Pharm. Sci., Kyushu Univ, <sup>2</sup>SOKENDAI, <sup>3</sup>NIPS & ExCELLS)



- 04-2 Age-related vulnerability of nigral dopaminergic neurons to extracellular Zn<sup>2+</sup> influx via AMPA receptor activation**  
 ○ Atsushi Takeda<sup>1</sup>, Nana Saeki<sup>1</sup>, Satoko Nakajima<sup>1</sup>, Ryusuke Nishio<sup>1</sup>, Haruna Tamano<sup>1,2</sup>  
 (<sup>1</sup>Sch. Pharm. Sci., Univ. Shizuoka, <sup>2</sup>Shizuoka Tohto Medical College)
- 04-3 Nigral dopaminergic degeneration by Zn<sup>2+</sup>-permeable GluR2-lacking AMPA receptor activation induced by H<sub>2</sub>O<sub>2</sub> and its regulation**  
 ○ Haruna Tamano<sup>1,2</sup>, Ryusuke Nishio<sup>2</sup>, Satoko Nakajima<sup>2</sup>, Misa Katahira<sup>2</sup>, Atsushi Takeda<sup>2</sup>  
 (<sup>1</sup>Shizuoka Tohto Medical College, <sup>2</sup>Sch. Pharm. Sci., Univ. Shizuoka)
- 04-4 Involvement of sulfane sulfur species in the formation of biogenic tellurium nanoparticles through the reduction of tellurium oxyanions**  
 ○ Hiroki Yanagi<sup>1</sup>, Yu-ki Tanaka<sup>2</sup>, Yasunori Fukumoto<sup>2</sup>, Yasumitsu Ogra<sup>2</sup>  
 (<sup>1</sup>Grad. Sch. Med. Pharm. Sci., Chiba Univ., <sup>2</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)
- 04-5 Development and application of quantitative analysis for reactive selenium species**  
 ○ Masaki Matsunaga<sup>1</sup>, Noriyuki Suzuki<sup>2</sup>, Yasumitsu Ogra<sup>2</sup>  
 (<sup>1</sup>Grad. Sch. Med. Pharm. Sci., Chiba Univ., <sup>2</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)

## Oral Session 5

August 31 (Wed) 14:50-15:50 Room B

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

Ryotarou Mitsumata (Denka Co., Ltd.)

- 05-1 Age-related changes in immunogenicity of influenza vaccine.**  
 ○ Tomohiro Narahara<sup>1</sup>, Nagisa Nakata<sup>1</sup>, Naoki Kishimoto<sup>2</sup>, Tsubasa Tani<sup>1</sup>, Ryotarou Mitsumata<sup>1</sup>, Shogo Misumi<sup>2</sup>  
 (<sup>1</sup>Denka Co., Ltd., <sup>2</sup>Faculty of Life Sciences., Kumamoto Univ.)
- 05-2 Suitable adjuvants for Recombinant Norovirus Vaccine.**  
 ○ Nagisa Nakata, Takenori Oikawa, Tomohiro Narahara, Ryotarou Mitsumata  
 (Vaccine & Biomedicine Dept. Denka Co., Ltd.)
- 05-3 Development of methods to control the interaction of SARS-CoV-2 ribonucleoprotein (NP) and viral RNA**  
 ○ Ryoya Sekine, Kouki Takeda, Hayato Irokawa, Shusuke Kuge  
 (Fac. Pharm. Sci., Tohoku Med. Pharm. Univ.)

**05-4 Drug repositioning focusing on ACE2-mediated SARS-CoV-2 entry**

○ Yuri Kato<sup>1</sup>, Kazuhiro Nishiyama<sup>1</sup>, Daiki Tomokiyo<sup>1</sup>, Akiyuki Nishimura<sup>2</sup>,  
Yasunari Kanda<sup>3</sup>, Motohiro Nishida<sup>1,2</sup>  
(<sup>1</sup>Kyushu Univ, <sup>2</sup>NIPS, <sup>3</sup>NIHS)

**05-5 Interindividual difference in the expression levels of in vivo factors involved in SARS-CoV-2 infection in human airway tissues**

○ Arisa Tsutsumi<sup>1</sup>, Kana Kobayashi<sup>1</sup>, Ikuo Kawamura<sup>1</sup>, Nobuhiko Miura<sup>1</sup>, Yoko Mori<sup>2</sup>,  
Takashi Isobe<sup>1</sup>, Susumu Ohkawara<sup>1</sup>, Nobumitsu Hanioka<sup>1</sup>, Hideto Jinno<sup>2</sup>,  
Toshiko Tanaka-Kagawa<sup>1</sup>  
(<sup>1</sup>Yokohama University of Pharmacy, <sup>2</sup>Faculty of Pharmacy, Meijo University)

## Oral Session 6

August 31 (Wed) 15:50-16:50 Room B

Chair: Shuntaro Hara (Sch. Pharm., Showa Univ.)

Atsushi Matsuzawa (Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

**06-1 Dihydropyrazine regulates the TLR4 negative feedback mechanism.**

○ Madoka Sawai<sup>1</sup>, Shunji Itoh<sup>2</sup>, Masaki Yoshida<sup>3</sup>, Jian-Rong Zhou<sup>4</sup>, Yutaka Tatano<sup>1</sup>,  
Yuu Miyachi<sup>4</sup>, Takumi Ishida<sup>1</sup>, Shinji Takechi<sup>4</sup>  
(<sup>1</sup>Sch. Pharm., at Fukuoka. Int. Univ. Health & Welfare., <sup>2</sup>Dept. Health Sci., Grad. Sch.  
Health Sci., Kansai Univ. Health Sci., <sup>3</sup>Sch. Biosci. Biotech., TUT., <sup>4</sup>Fac. Pharmaceut.  
Sci., Sojo Univ.)

**06-2 Exploration of nuclear degradation pathways of a lysosomal stress-responsive transcription factor TFEB**

○ Masatsugu Miyara, Soki Ishitani, Yaichiro Kotake  
(Grad. Sch. of Biomed. and Health Sci., Hiroshima Univ.)

**06-3 Comprehensive analysis of gene expression in malnutrition-induced splenic involution**

○ Kei Nakayama, Sae Kozai, Yuka Komma, Hiroshi Hasegawa  
(Lab. Hygienic. Sci., Kobe Pharma. Univ.)

**06-4 A comprehensive toxicological assessment of *trans*-fatty acids using novel molecular bases**

○ Yusuke Hirata, Ryo Ashida, Takuya Noguchi, and Atsushi Matsuzawa  
(Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

**06-5 Pre-clinical ototoxicity evaluation of mono-6-O- $\alpha$ -D-maltosyl- $\gamma$ -cyclodextrin as a novel therapeutic candidate against Niemann-Pick disease type C**

○ Mayuko Tanaka<sup>1</sup>, Yusei Yamada<sup>2</sup>, Taichi Sakai<sup>1</sup>, Aina Shirakawa<sup>1</sup>, Yuki Kondo<sup>1</sup>, Keiichi Motoyama<sup>1</sup>, Taishi Higashi<sup>1</sup>, Hidetoshi Arima<sup>3</sup>, Yuki Kurauchi<sup>1</sup>, Takahiro Seki<sup>1</sup>, Hiroshi Katsuki<sup>1</sup>, Yasuyo Okada<sup>4</sup>, Katsumi Higaki<sup>5</sup>, Ryuji Ikeda<sup>2</sup>, Toru Miwa<sup>6</sup>, Daiki Takeda<sup>7</sup>, Yoriyasa Orita<sup>7</sup>, Muneaki Matsuo<sup>8</sup>, Tetsumi Irie<sup>1</sup>, Yoichi Ishitsuka<sup>1</sup>

(<sup>1</sup> Grad. Sch. of Pharm. Sci., Kumamoto Univ.,<sup>2</sup>Dept. of Pharm., Univ. of Miyazaki Hosp.,<sup>3</sup>Daiichi Univ. of Pharm.,<sup>4</sup>Sch of Pharm. and Pharm. Sci., Mukogawa Women's Univ.,<sup>5</sup>Organization for Res. Initiative & Promotion, Tottori Univ.,<sup>6</sup>Grad. Sch. of Med., Osaka Metropolitan Univ.,<sup>7</sup>Grad. Sch. of Med. Sci., Kumamoto Univ.,<sup>8</sup> Faculty of Med. Sci., Saga Univ.)

## Poster Session

Odd: August 30 (Tue) 13:50-14:40 Room C

Even: August 31 (Wed) 17:00-17:50 Room C

- P-001 Investigation of the migratory and invasive capacity of thio-dimethylarsinic acid exposed V79 clones**  
○ Kayoko Kita, Tatsuya Sunada, Taro Honma, Toshihide Suzuki  
(Fac. Pharma-Sci., Teikyo Univ.)
- P-002 Induction of ZIP8 by lead through phosphorylation and reduction of IκBα in cultured vascular endothelial cells**  
○ Tomoya Fujie<sup>1,2</sup>, Keisuke Ito<sup>1,3</sup>, Ayumi Muraoka<sup>2</sup>, Yusuke Ozaki<sup>1</sup>, Tsuyoshi Nakano<sup>2</sup>, Chika Yamamoto<sup>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., <sup>3</sup>Fac. of Pharm. Sci., Suzuka Univ. of Med. Sci.)
- P-003 Role of DHA metabolites in protection against Methylmercury (MeHg)-induced neurotoxicity in the brain of mice**  
○ Ami Oguro<sup>1,2</sup>, Yasuhiro Ishihara<sup>2</sup>, Yaichiro Kotake<sup>1</sup>, Takeshi Yamazaki<sup>2</sup>  
(<sup>1</sup>Grad. Sch. of Biomed. and Health Sci. Hiroshima Univ. <sup>2</sup>Grad. Sch. Integrated Sci. for Life, Hiroshima Univ.)
- P-004 Role for protein kinase C-δ in the induction of oncostatin M expression by methylmercury**  
Daiki Fujiwara, Kei Moriya, Ryu Komatsu, Ryota Yamagata, ○ Gi-Wook Hwang  
(Fac. Pharm. Sci., Tohoku Med. Pharm. Univ.)
- P-005 Sulfane sulfur transition during methylmercury exposure in the cells**  
○ Takamitsu Unoki<sup>1</sup>, Masahiro Akiyama<sup>2</sup>, Yoshito Kumagai<sup>3</sup>, Masatake Fujimura<sup>1</sup>  
(<sup>1</sup>Dept. Basic Med. Sci., Nat. Inst. Minamata Dis., <sup>2</sup>Fac. Pharm., Keio Univ., <sup>3</sup>Fac. Med., Univ. of Tsukuba.)
- P-006 Super sulfide can release Se-mercuration of selenoprotein P and recover its selenium supply function.**  
○ Runa Kudo, Ayako Mizuno, Takashi Toyama, Yoshiro Saito  
(Grad. Sch. Pharm. Sci., Tohoku Univ.)
- P-007 Arsenite-induced cystathionine gamma-lyase has a protective effect against arsenite cytotoxicity in cultured vascular endothelial cells.**  
○ Tsutomu Takahashi<sup>1</sup>, Naoya Miyakawa<sup>1</sup>, Yayoi Tsuneoka<sup>1</sup>, Yo Shinoda<sup>1</sup>, Tomoya Fujie<sup>2,3</sup>, Chika Yamamoto<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Yasuyuki Fujiwara<sup>1</sup>  
(<sup>1</sup>Sch. Pharm., Tokyo Univ. Pharm. Life Sci., <sup>2</sup>Fac. Pharm. Sci., Toho Univ. <sup>3</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)

- P-008 Cadmium elongates dermatan sulfate chains by inducing CHSY1 in vascular endothelial cells.**  
 ○ Takato Hara<sup>1</sup>, Shogo Matsuura<sup>1</sup>, Keita Aikawa<sup>1</sup>, Misaki Shirai<sup>1</sup>, Toshiyuki Kaji<sup>2</sup>, Chika Yamamoto<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-009 A zinc complex that selectively induces ZnT1 transcription via MTF-1 in vascular endothelial cells.**  
 ○ Mayu Yokoyama<sup>1</sup>, Tomoya Fujie<sup>1,2</sup>, Takato Hara<sup>1</sup>, Toshiyuki Kaji<sup>2</sup>, Chika Yamamoto<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-010 Cadmium renal toxicity regulated by PPAR $\delta$  transcriptional activity**  
 ○ Chikage Mori, Jin-Yong Lee, Maki Tokumoto, Masahiko Satoh  
 (Sch. Pharm., Aichi Gakuin Univ.)
- P-011 Effect of cadmium on hyaluronan synthesis in cultured vascular endothelial cells**  
 ○ Misaki Shirai<sup>1</sup>, Takato Hara<sup>1</sup>, Toshiyuki Kaji<sup>2</sup>, Chika Yamamoto<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Toho Univ., <sup>2</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-012 Inhibitory effect of cadmium on the invasion of human trophoblast-derived HTR-8/SVneo cells**  
 ○ Shoko Ogushi<sup>1</sup>, Tsuyoshi Nakanishi<sup>2</sup>, Tomoki Kimura<sup>1</sup>  
 (<sup>1</sup>Fac. Sci. Eng., Setsunan Univ., <sup>2</sup>Gifu Pharm. Univ.)
- P-013 Adsorption capability of tea waste leaves for cadmium ion removal**  
 ○ Tsukine Fujimoto, Takehiro Nakamura, Fumihiko Ogata, Naohito Kawasaki  
 (Fac. Pharm. Kindai. Univ.)
- P-014 Mechanism of tributyltin-induced LC3-II accumulation**  
 ○ Shunichi Hatamiya, Masatsugu Miyara, Yaichiro Kotake  
 (Grad. Sch. of Biomed. and Health Sci., Hiroshima Univ.)
- P-015 TBT activates Keap1-Nrf2 pathway via Keap1 decrease.**  
 ○ Misaki Hatano, Shunichi Hatamiya, Masatsugu Miyara, Yaichiro Kotake  
 (Grad. Sch. Biomed. Health Sci., Hiroshima Univ.)
- P-016 Isolation of several strains of selenium-metabolizing enterobacteria and elucidation of their selenium metabolism**  
 ○ Sakie Horiai<sup>1</sup>, Kazuaki Takahashi<sup>2</sup> and Yasumitsu Ogra<sup>3</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Chiba Univ., <sup>2</sup>Grad. Sch. Horticulture, Chiba Univ., <sup>3</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)

- P-017 Elucidation of the function of myoglobin in selenium metabolic pathway of the heart**  
○ Tae Kuroiwa<sup>1</sup>, Sakura Yoshida<sup>1</sup>, Eriko Hori<sup>1</sup>, Yumi Abiko<sup>1</sup>, Takeshi Fuchigami<sup>2</sup>, Akira Toriba<sup>1</sup>, Mamoru Haratake<sup>3</sup>, Morio Nakayama<sup>1</sup>  
(<sup>1</sup>Graduate School of Biomedical Sciences, Nagasaki University, <sup>2</sup>Graduate School of Medical Sciences, Kanazawa University, <sup>3</sup>School of Pharmaceutical Sciences, Sojo University)
- P-018 Characteristics of activated bentonite using a binary acid solution and its decreasing capacity of electric conductivity in tap water**  
○ Eri Nagahashi, Fumihiko Ogata, Takehiro Nakamura, Naohito Kawasaki  
(Fac. Pharm., Kindai Univ)
- P-019 Optimization of the granulation conditions of nickel–aluminum–zirconium complex hydroxide using colloidal silica for the recovery of chromium(VI) ions from the liquid phase**  
○ Ayako Tabuchi<sup>1</sup>, Fumihiko Ogata<sup>1</sup>, Megumu Toda<sup>2</sup>, Masashi Otani<sup>2</sup>, Takehiro Nakamura<sup>1</sup>, Naohito Kawasaki<sup>1</sup>  
(<sup>1</sup>Fac. Pharm., Kindai Univ., <sup>2</sup>Kansai Catalyst Co., Ltd.)
- P-020 Studies on the recovery of vanadium(V) ions using the complex Ni-Al hydroxide from aqueous media**  
○ Fumihiko Ogata<sup>1</sup>, Yuya Teranishi<sup>1</sup>, Ayako Tabuchi<sup>1</sup>, Megumu Toda<sup>2</sup>, Masashi Otani<sup>2</sup>, Takehiro Nakamura<sup>1</sup>, Naohito Kawasaki<sup>1</sup>  
(<sup>1</sup>Fac. Pharm., Kindai Univ, <sup>2</sup>Kansai Catalyst Co., Ltd.)
- P-021 Adsorption capacities of mercury(II) and lead(II) ions onto Na-type or K-type zeolite produced from coal fly ash**  
○ Yuhei Kobayashi, Fumihiko Ogata, Takehiro Nakamura, Naohito Kawasaki  
(Fac. Pharm., Kindai Univ.)
- P-022 Study on the adsorption capability of platinum(IV) ions from water environment using virgin and calcined wheat brans**  
○ Yugo Uematsu, Misaki Nakamura, Fumihiko Ogata, Takehiro Nakamura, Naohito Kawasaki  
(Fac. Pharm., Kindai Univ.)
- P-023 Antioxidant effect of Rosemary extract in edible oils (II)**  
○ Toshiyuki Kimura, Haruka Minami, Akane Ide, Yasunori Sato  
(Faculty of Pharmaceutical Sciences, Hokuriku University)

- P-024 Estimated committed effective dose from the natural radionuclide polonium-210 in food (2)**  
○ Akiko Hachisuka, Keisuke Soga, Kazunari Kondo  
(National Institute of Health Sciences)
- P-025 Redox-dependent internalization (REDAI) of GPCRs by sulforaphane**  
○ Kazuhiro Nishiyama<sup>1</sup>, Akiyuki Nishimura<sup>2</sup>, Kakeru Shimoda<sup>2</sup>, Yuri Kato<sup>1</sup>, Takahiro Shibata<sup>3</sup>, Yoshito Kumagai<sup>4</sup>, Takaaki Akaike<sup>5</sup>, Koji Uchida<sup>6</sup>, Motohiro Nishida<sup>1,2</sup>  
(<sup>1</sup>Kyushu Univ, <sup>2</sup>NIPS, <sup>3</sup>Nagoya Univ, <sup>4</sup>Univ of Tsukuba, <sup>5</sup>Tohoku Univ, <sup>6</sup>Univ of Tokyo)
- P-026 Sudachitin suppresses melanoma cell growth by inhibiting fatty acid synthase (FASN)**  
○ Takashige Kawakami, Takehiro Ohara, Tomomi Abe, Masahisa Inoue  
(Fac. Pharmaceut. Sci., Tokushima Bunri Univ.)
- P-027 Analysis of effects of the tea ricemalt ingredient on the improvement of the male infertility**  
○ Mahiro Nakata<sup>1</sup>, Tomoko Koumura<sup>1</sup>, Kumiko Hioki<sup>2</sup>, Bunsei Yamamoto<sup>2</sup>, Masahiro Yamamoto<sup>2</sup>, Hirotaka Imai<sup>1</sup>  
(<sup>1</sup>Sch. of Pharm. Sci., Kitasato Univ., <sup>2</sup> Biogenkoji Research Institute Co.,Ltd)
- P-028 Inhibitory effects of ammonium alginate on progression of chronic kidney disease in salt-loading mice**  
○ Arina Ishimatsu<sup>1</sup>, Yuya Hayashi<sup>2</sup>, Hidenori Takeshita<sup>2</sup>, Risako Onodera<sup>1</sup>, Taishi Higashi<sup>1,3</sup>, Keiichi Motoyama<sup>1</sup>  
(<sup>1</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>Toymedical Co., Ltd., <sup>3</sup>Priority Organization for Innovation and Excellence, Kumamoto Univ.)
- P-029 Screening of nuclear receptor CAR and PPAR $\alpha$  activation potential of chemicals which cause liver cancer in rat carcinogenicity test.**  
○ Ryota Shizu, Takumi Sato, Yoshie Miura, Takuomi Hosaka, Yuichiro Kanno, Takamitsu Sasaki, Kouichi Yoshinari  
(Sch. Pharm. Sci., Univ. Shizuoka)
- P-030 Mechanism of species differences in phenobarbital/CAR-dependent liver tumor promotion**  
○ Natsuki Makida, Ryota Shizu, Keiichiro Sobe, Takuomi Hosaka, Yuichiro Kanno, Takamitsu Sasaki, Kouichi Yoshinari  
(Sch. Pharm. Sci., Univ. Shizuoka)

- P-031 Effect of phosphorylation of HIV capsid protein on core formation**  
○ Tamae Hirano<sup>1</sup>, Naoki Kishimoto<sup>1</sup>, Ayaka Irie<sup>1</sup>, Nobutoki Takamune<sup>2</sup>, Shogo Misumi<sup>1</sup>  
(<sup>1</sup>Sch. Pharm, Kumamoto Univ, <sup>2</sup>KIDO.)
- P-032 Metabolic reprogramming has a negative effect on HIV latency**  
○ Naoki Kishimoto<sup>1</sup>, Towa Abe<sup>1</sup>, Satoshi Miura<sup>1</sup>, Keita Tanaka<sup>1</sup>, Nobutoki Takamune<sup>2</sup>, Shogo Misumi<sup>1</sup>  
(<sup>1</sup> Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup> KIDO)
- P-033 Investigation of compounds that inhibit endoplasmic reticulum stress caused by HCV Core mutants.**  
○ Marie Suzuki<sup>1</sup>, Ryoya Sekine<sup>1</sup>, Kouki Takeda<sup>1</sup>, Haruhisa Kikuchi<sup>2,3</sup>, Hayato Irokawa<sup>1</sup> and Shusuke Kuge<sup>1</sup>  
(<sup>1</sup> Fac. Pharm. Sci., Tohoku Med. Pham. Univ., <sup>2</sup> Grad. Sch. Pharm. Sci., Tohoku Univ., <sup>3</sup> Fac. Pharm., Keio Univ.)
- P-034 Fungus-bacterium crosstalk: *Candida albicans* promotes meropenem tolerance of *Escherichia coli* in polymicrobial biofilms**  
○ Sanae Kurakado<sup>1</sup>, Shintaro Eshima<sup>1,2</sup>, Yasuhiko Matsumoto<sup>1</sup>, Takayuki Kudo<sup>2</sup>, Takashi Sugita<sup>1</sup>  
(<sup>1</sup>Meiji Pharm. Univ., <sup>2</sup>Toshiba Rinkan HP.)
- P-035 The need for a national roll-out of information for pregnant HTLV-1 carrier women**  
○ Hilomi Iwai<sup>1</sup>, Yusuke Deguchi<sup>1</sup>, Hideki Yamamoto<sup>1,2</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Teikyo Univ, <sup>2</sup>Fac. Med., Univ of Tsukuba)
- P-036 The regulation of CD44 expression by aryl hydrocarbon receptor in human hepatocellular carcinoma HuH7 cells.**  
○ Noriko Sanada<sup>1</sup>, Mayu Shimogo<sup>1</sup>, Yusa Fujimoto<sup>1</sup>, Naoya Yamashita<sup>1</sup>, Ryoichi Kizu<sup>1</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Doshisha Women's Coll.)
- P-037 Mechanisms underlying the activation of fibrinolytic system in human vascular endothelial cells by gamma-ray irradiation**  
○ Miyabi Kobayashi<sup>1</sup>, Lihito Ikeuchi<sup>1</sup>, Tsuyoshi Nakano<sup>2</sup>, Kazuki Kitabatake<sup>1</sup>, Mitsutoshi Tsukimoto<sup>1</sup>, Chika Yamamoto<sup>2</sup>, Toshiyuki Kaji<sup>1</sup>, Tomoya Fujie<sup>1</sup>  
(<sup>1</sup>Fac. of Pharm. Sci., Tokyo Univ. of Sci., <sup>2</sup>Fac. of Pharm. Sci., Toho Univ.)



- P-038 Evaluation of the influence of PXR activation on epithelial-mesenchymal transition of liver cancer cells using reporter assay with the *VIMENTIN* promoter.**  
○ Ryonosuke Baba, Ryota Shizu, Takumi Sato, Takuomi Hosaka, Yuichiro Kanno, Kouichi Yosinari  
(Sch. Pharm. Sci., Univ. Shizuoka)
- P-039 An observation of DNA repair process and release form cell cycle arrest triggered by DNA damage response**  
○ Sawako Shindo, Ayana Ohishi, Reika Kohinata, Kenji Hattori  
(Fac. Pharm. Sci., Meiji Pharm. Univ.)
- P-040 Involvement of autophagy in gefitinib-induced apoptosis**  
○ Shoya Endo, Natsuki Ota, Keisuke Sato, Ryosuke Tatsunami  
(Fac. of Pharm. Sci., Hokkaido Univ. of Sci.)
- P-041 Effect of Chloroquine on Doxorubicin-induced Apoptosis in A549 Cells**  
○ Natsuki Ota, Shoya Endo, Keisuke Sato, Ryosuke Tatsunami  
(Fac. of Pharm. Sci., Hokkaido Univ. of Sci.)
- P-042 Elucidation of novel roles of NBR1 in oxidative stress-induced cell death “parthanatos”**  
○ Wakana Suzuki, Midori Suzuki, Yusuke Hirata, Takuya Noguchi, Atsushi Matsuzawa  
(Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- P-043 Effect of antioxidative substance on dihydropyrazine-induced cytotoxicity in HeLa cells**  
○ Yuu Miyauchi<sup>1</sup>, Madoka Sawai<sup>2</sup>, Hisao Kansui<sup>3</sup>, Shinji Takechi<sup>1</sup>  
(<sup>1</sup> Lab. Hyg. Chem., Fac. Pharmaceut. Sci., Sojo Univ., <sup>2</sup> Sch. Pharm. at Fukuoka, Int. Univ. Health & Welfare, <sup>3</sup> Lab. Org. Chem., Fac. Pharmaceut. Sci., Sojo Univ.)
- P-044 Decrease of selenium-supply activity of selenoprotein P in inflammatory M1 macrophage**  
○ Mayumi Sugawara<sup>1</sup>, Kotoko Arisawa<sup>2</sup>, Yoshiro Saito<sup>2</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Tohoku Univ, <sup>2</sup>Grad. Sch. Pharm. Sci., Tohoku Univ)
- P-045 Molecular Mechanisms of Viral Infection-Dependent Decrease of Antiviral Immune Responses in a Chronic Obstructive Pulmonary Disease Model**  
○ Megumi Hayashi<sup>1</sup>, Noriki Takahashi<sup>1,2</sup>, Tomoki Kishimoto<sup>1</sup>, Ayami Fukuyama<sup>1</sup>, Choyo Ogasawara<sup>1</sup>, Keiko Shuto<sup>3</sup>, Mary Ann Suico<sup>1</sup>, Hirofumi Kai<sup>1</sup>, Tsuyoshi Shuto<sup>1</sup>  
(<sup>1</sup>Molecular Medicine, Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>HIGO program, <sup>3</sup>Fac. Pharm. Sci., Sojo Univ.)

- P-046 Elucidation of the novel mechanisms by which surfactants initiate pro-inflammatory responses**  
 ○ Maoko Tan, Tomohiro Kagi, Yusuke Hirata, Takuya Noguchi, and Atsushi Matsuzawa  
 (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)
- P-047 Involvement of adenine metabolites on the transcriptional regulation of heparan sulfate proteoglycans expression in vascular endothelial cells.**  
 ○ Lihito Ikeuchi<sup>1</sup>, Tsuyoshi Nakano<sup>2</sup>, Musubu Takahashi<sup>1</sup>, Takato Hara<sup>2</sup>, Kazuki Kitabatake<sup>1</sup>, Mitsutoshi Tsukimoto<sup>1</sup>, Chika Yamamoto<sup>2</sup>, Tomoya Fujie<sup>1</sup>, Toshiyuki Kaji<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Tokyo Univ. of Sci., <sup>2</sup>Fac. Pharm. Sci., Toho Univ.)
- P-048 Autodephosphorylation of Myosin Phosphatase Regulates Endothelial Permeability**  
 ○ Ayana Shiraki<sup>1</sup>, Koichi Uemura<sup>1</sup>, Aya Nishizaki<sup>2</sup>, Saki Ishii<sup>2</sup>, Kenji Suzuki<sup>1,2</sup>, Takako Kaneko-Kawano<sup>1,2</sup>  
 (<sup>1</sup>Grad. Sch. Pharm., Ritsumeikan Univ., <sup>2</sup>Col. Pharm. Sci., Ritsumeikan Univ.)
- P-049 Excess supersulfide is exported through cystine-dependent antiporters**  
 ○ Hanako Aoki<sup>1</sup>, Masahiro Akiyama<sup>2,3</sup>, Takamitsu Unoki<sup>2,4</sup>, Eiji Warabi<sup>1,2</sup>, Akiyuki Nishimura<sup>5</sup>, Motohiro Nishida<sup>5,6</sup>, Yoshito Kumagai<sup>1,2</sup>  
 (<sup>1</sup>Grad. Sch. Med Sci., Tsukuba Univ., <sup>2</sup>Fac. Medicine., Tsukuba Univ., <sup>3</sup>Fac. Pharm., Keio Univ., <sup>4</sup>Dept. Basic Med. Sci., Nat. Inst. Minamata Dis., <sup>5</sup>Div. Cardiac Signal., Nat. Inst. Phys. Sci., <sup>6</sup>Grad. Sch. Pharm. Sci., Kyushu Univ.)
- P-050 Tissue-specific degradation of the nuclear receptor PPAR $\gamma$**   
 ○ Makoto Osabe, Toshiyuki Higuchi  
 (Div. Pharm. Health Biosci., Nihon Pharm. Univ.)
- P-051 Effects of heated tobacco aerosol exposure on inflammatory cytokine levels in mice**  
 ○ Akira Ushiyama<sup>1</sup>, Marie Sawa<sup>2</sup>, Hirotaka Motegi<sup>2</sup>, Yohei Inaba<sup>1</sup>, Kenji Hattori<sup>2</sup>  
 (<sup>1</sup>Dept. Env Health, National Institute of Public Health, <sup>2</sup>Fac. Pharm. Sci., Meiji Pharm. Univ.)
- P-052 The analysis of metal composition of atmosphere from the remote and urban sites and their inflammatory and cytotoxicity effect**  
 ○ Atsushi Furukawa<sup>1</sup>, Yayoi Inomata<sup>2</sup>, Chisato Anma<sup>1</sup>, Risa Kono<sup>1</sup>, Minami Satake<sup>1</sup>, Yuka Nagata<sup>1</sup>, Takafumi Seto<sup>3</sup>, Ryo Suzuki<sup>1</sup>  
 (<sup>1</sup>Pharm., Kanazawa Univ., <sup>2</sup>Inst. of Nat. and Env. Tech., Kanazawa Univ., <sup>3</sup>Sci. and Eng., Kanazawa Univ.)

- P-053 Transformable polymer for improvement of pharmaceutical properties of proteins**  
 ○ Taishi Higashi<sup>1,2</sup>, Toru Taharabaru<sup>1</sup>, Tetsuya Kogo<sup>1</sup>, Kosei Utatsu<sup>1</sup>, Takuya Kihara<sup>1</sup>,  
 Risako Onodera<sup>1</sup>, Keiichi Motoyama<sup>1</sup>  
 (<sup>1</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>Prior. Org. Innov. Excel., Kumamoto Univ.)
- P-054 Functional analysis of prostacyclin synthase in differentiated macrophages**  
 ○ Keishi Yamaguchi, Tsubasa Ochiai, Hiroshi Kuwata and Shuntaro Hara  
 (Sch. of Pharm., Showa Univ.)
- P-055 Prostacyclin synthase deficiency promotes chemical carcinogen-induced bladder carcinogenesis.**  
 ○ Yuka Sasaki<sup>1</sup>, Yuki Endo<sup>2</sup>, Yasutomo Suzuki<sup>2</sup>, Yukihiro Kondo<sup>2</sup>, Chieko Yokoyama<sup>3</sup>,  
 Shuntaro Hara<sup>1</sup>  
 (<sup>1</sup>Showa Univ. Sch. of Pharmacy, <sup>2</sup>Nippon Med. Sch., <sup>3</sup>Kanagawa Inst. of Tech.)
- P-056 Heterodimerization and functional association of prostanoid EP3 and FP receptors**  
 ○ Takashima Ryusei, Yuki Hirai, Toshiko Sugimoto, Tomoaki Inazumi,  
 Soken Tsuchiya, Yukihiko Sugimoto  
 (Department of Pharmaceutical Biochemistry, Graduate School of Pharmaceutical Sciences, Kumamoto University)
- P-057 Regulation of hepatic *Osbpl3* expression by PPAR $\gamma$**   
 ○ Daisuke Aibara, Takata Kosuke, Funo Hashimoto, Ai Sakaguchi, Kohei Matsuo,  
 Kimihiko Matsusue  
 (Faculty of Pharmaceutical Science, Fukuoka University)
- P-058 Protein insolubilization induced by mitochondrial dysfunction during starvation**  
 ○ Saya Takao, Masatsugu Miyara, Namiko Watanabe, Yaichiro Kotake  
 (Grad. Sch. of Biomed. and Health Sci., Hiroshima Univ.)
- P-059 Ablation of Selenbp1 enhances lipid accumulation caused by excessive fructose intake**  
 ○ Takayuki Koga<sup>1</sup>, Makoto Hiromura<sup>1</sup>, Syota Kagawa<sup>1</sup>, Masayo Hirao-Suzuki<sup>2</sup>,  
 Shuso Takeda<sup>3</sup>, Yuji Ishii<sup>4</sup>, Takumi Ishida<sup>5</sup>, Fumihiko Nagashima<sup>1</sup>, Yuko Kobuke<sup>1</sup>,  
 Akihisa Toda<sup>1</sup>, Fumio Soeda<sup>1</sup>  
 (<sup>1</sup>Daiichi Univ. Pharm., <sup>2</sup>Fac. Pharm. Sci., Hiroshima Intl. Univ., <sup>3</sup>Fac. Pharm. Sci.,  
 Fukuyama Univ., <sup>4</sup>Grad. Sch. Pharmaceut. Sci., Kyushu Univ., <sup>5</sup>Sch. Pharm. Fukuoka,  
 Int. Univ. Health & Welfare)

- P-060 The effect of deficiency of acyl-CoA synthetase long chain family member (ACSL) 4 in paraquat- induce lung injury**  
○ Yuki Tomitsuka, Hiroshi Kuwata, Shuntaro Hara  
(Sch. of pharmacy, Showa Univ.)
- P-061 Role of ACSL4 on cell death in human tubular epithelial HK-2 cells**  
○ Hiroshi Kuwata, Yuki Tomitsuka, Shuntaro Hara  
(Sch. Pharm. Showa Univ.)
- P-062 Evaluation of point mutation in the aryl hydrocarbon receptor for transcriptional activation.**  
○ Naoya Yamashita<sup>1</sup>, Kyoko Yoshida<sup>1</sup>, Yuichiro Kanno<sup>2</sup>, Noriko Sanada<sup>1</sup>, and Ryoichi Kizu<sup>1</sup>  
(<sup>1</sup> Fac. Pharmaceut. Sci., Doshisha Women's College of Liberal Arts., <sup>2</sup> Sch. of Pharmaceut. Sci., Univ. of Shizuoka.)
- P-063 Functional analysis of vitamin K converting enzyme UBIAD1 on bone formation using time and tissue specific gene-knockout mice.**  
○ Shunsuke Hirashima<sup>1</sup>, Yukino Kiyooka<sup>2</sup>, Shinichiro Kaetsu<sup>2</sup>, Kimie Nakagawa<sup>1,2</sup>  
(<sup>1</sup> Grad. Sch. Pharm. Sci., Kobegakuin Univ, <sup>2</sup> Fac. Pharm. Sci., Kobegakuin Univ.)
- P-064 BMAL1, a core component of the circadian clock system, regulates the browning of white adipocytes in mice**  
○ Hirotake Ishii, Satoshi Kitaura, Yukiko Takasugi, Taira Wada, Shigeki Shimba  
(Sch. Pharm., Nihon Univ.)
- P-065 Discovery of a protein to regenerate growth inhibitory factor/metallothionein-3 (GIF/MT3)**  
○ Souma Hitomi<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-066 Functional analysis of vitamin K converting enzymes UBIAD1 and Menaquinone-4 in chondrocytes**  
○ Shinichiro Kaetsu<sup>1</sup>, Shunsuke Hirashima<sup>2</sup>, Yukino Kiyooka<sup>1</sup>, Kimie Nakagawa<sup>1,2</sup>  
(<sup>1</sup> Fac. Pharm. Sci., Kobegakuin Univ, <sup>2</sup> Grad. Sch. Pharm. Sci., Kobegakuin Univ.)
- P-067 Role of Non-mitochondrial Cardiolipin in Spermatogenesis**  
○ Dai Mochizuki<sup>1</sup>, Sosuke Akagi<sup>1</sup>, Yuta Shimanaka<sup>1</sup>, Hiroyuki Arai<sup>2</sup>, Nozomu Kono<sup>1,3</sup> and Junken Aoki<sup>1</sup>  
(<sup>1</sup> Grad. Pharm. Sci., The Univ. of Tokyo, <sup>2</sup> Grad. Med. Sci., Center of Disease Biology and integrative Medicine, the Univ. of Tokyo, <sup>3</sup>AMED-CREST)

- P-068 Changes in serum levels of ApoA-1 binding protein with aging and its anti-inflammatory effects**  
○ Kouki Tachibana<sup>1,2</sup>, Kohshi Kusumoto<sup>1</sup>, Rinka Maehashi<sup>1</sup>, Tomoe Kiyama<sup>1</sup>, Ayana Nagao<sup>1</sup>, Maki Tsujita<sup>3</sup>, Yu Ishima<sup>2</sup>, Tatsuhiro Ishida<sup>2</sup>, Keiichiro Okuhira<sup>1</sup>  
(<sup>1</sup>Fac. Pharm., Osaka Medical and Pharmaceutical Univ., <sup>2</sup>Institute of Biomedical Sciences, Tokushima Univ., <sup>3</sup>Biochemistry, Nagoya City Univ.)
- P-069 Epigenetic regulation of pulmonary fibrosis by epigenome modifying enzyme**  
○ Tomoaki Koga, Naofumi Funagura, Seong Hyeon Hong, Mitsuyoshi Nakao  
(<sup>1</sup>Dept. of Med. Cell. Biol., Inst. of Mol. Embryol. Genet. (IMEG), Kumamoto Univ.)
- P-070 Role of ketone body metabolism in the brain**  
○ Shinya Hasegawa, Masahiko Imai, Masahiro Yamasaki, Noriko Takahashi  
(Hoshi Univ.)
- P-071 Generation and phenotypic analysis of GPx4 amino acid mutant mice (human metaphyseal dysplasia model)**  
○ Isaku Tanabe, Mayu Ota, Kahori Tsuruta, Hirotaka Imai  
(Sch. Pharm. Sci., Kitasato Univ.)
- P-072 Nucleoside antimetabolite/analog induced iron independent lipid peroxidation derived novel cell death, lipoxytosis**  
○ Ayaka Enomoto, Mumu Ito, Saki Tsukuda, Emi Ono, Kahori Tsuruta, Hirotaka Imai  
(Grad. Sch. Pharm. Sci., Kitasato Univ.)
- P-073 Functional analysis of a novel lipid oxidation gene, Lipo-1**  
○ Shotarou Hatanaka, Masaki Matsuoka, Hirotaka Imai  
(Grad. sch. Pharm. Sci. kitasato Univ.)
- P-074 MAPK activation by 9,10-phenanthrenequinone induces non-canonical phosphorylation of receptor tyrosine kinases**  
○ Nao Yamagishi, Jun-ichiro Takahashi, Yue Zhou, Satoru Yokoyama, Hiroaki Sakurai  
(Dept. Cancer Cell Biology, Grad. Sch. Pharm. Sci., Univ. Toyama)
- P-075 Effects of fatty acids on oxidative stress-induced NF-κB activation**  
○ Toshiyuki Oshima<sup>1</sup>, Makoto Murakami<sup>2</sup>, Kenshiro Aoki<sup>1</sup>, Yoshinori Ito<sup>1</sup>, Tomofumi Fujino<sup>1</sup>, Makio Hayakawa<sup>1</sup>  
(<sup>1</sup>Sch. Pharm., Tokyo Univ. Pharm. Life Sci., <sup>2</sup>Grad. Sch. Med., Univ. Tokyo)
- P-076 HSP70 cochaperon BAG-1 inhibits Erastin-induced ferroptosis.**  
○ Kouki Takeda, Hayato Irokawa, Ryoya Sekine Shusuke Kuge  
(Dept. Microbiol., Fac. Pharm. Sci., Tohoku Med. Pharm. Univ.)

- P-077 Dihydropyrazines induce endoplasmic reticulum stress and inhibit autophagy in human hepatoma HepG2 cells**  
 ○ Tamae Koba<sup>1</sup>, Ayano Ohshiro<sup>1</sup>, Fumi Kamezaki<sup>1</sup>, Ayaka Horizoe<sup>1</sup>, Yuu Miyauchi<sup>1</sup>, Madoka Sawai<sup>2</sup>, Takumi Ishida<sup>2</sup>, Shinji Takechi<sup>1</sup>  
 (<sup>1</sup>Fac. Pharmaceut. Sci., Sojo Univ., <sup>2</sup>Sch. Pharm., at Fukuoka. Int. Univ. Health & Welfare.)
- P-078 Involvement of oxidative-stress senser ‘Bag-1’ for Doxorubicin-induced cardiomyopathy**  
 ○ Hayato Irokawa, Atsushi Inose, Kouki Takeda, Tomohiro Kimura, Osamu Nakajima, Shusuke Kuge  
 (Dept. Microbiol., Fac. Pharmaceut. Sci., Tohoku Med. Pham. Univ.)
- P-079 Comparison of the mechanisms of cytotoxicity to cisplatin, paraquat, and erastin in the S3 cells derived from mouse kidney proximal tubular S3 segment**  
 ○ Hiroki Taguchi<sup>1</sup>, Hitomi Fujishiro<sup>1</sup>, Seiichiro Himeno<sup>1,2</sup>, Daigo Sumi<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Tokushima Bunri Univ, <sup>2</sup>Sch. Pharm. Sci., Showa Univ.)
- P-080 Relationship between impaired glucose tolerance and motor function by aging and selenoprotein expression in skeletal muscle**  
 ○ Hirofumi Ogino<sup>1</sup>, Miku Ozaki<sup>1</sup>, Koichi Murano<sup>2</sup>, Yuma Takiguchi<sup>1</sup>, Kaisei Matsuzaka<sup>1</sup>, Tomofumi Okuno<sup>1</sup>, Hitoshi Ueno<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Setsunan Univ, <sup>2</sup>Osaka Institute of Public Health.)
- P-081 Protective effects of nanoparticles encapsulating ferulic acid against CCl<sub>4</sub>-induced oxidative liver damage**  
 Tabassum Ara<sup>1</sup>, Mizune Ozono<sup>2</sup>, ○ Kentaro Kogure<sup>2</sup>  
 (<sup>1</sup> Grad. Sch. Pharm. Sci., Tokushima Univ, <sup>2</sup>Grad. Sch. Biomed. Sci., Tokushima Univ.)
- P-082 Antioxidative activity of human serum albumin via supersulfides**  
 ○ Mayumi Ikeda<sup>1,2</sup>, Yasunori Iwao<sup>1</sup>, Yu Ishima<sup>2</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Wakayama Medical Univ, <sup>2</sup> Fac. Pharm. Sci., Tokushima Univ.)
- P-083 Biological activity of supersulfide in various human biological fluids**  
 ○ Yu Ishima<sup>1</sup>, Mayumi Ikeda<sup>2</sup>, Maki Sakai<sup>1</sup>, Hiroki Osafune<sup>1</sup>, Yasunori Iwao<sup>2</sup>, Toru Maruyama<sup>3</sup>, Masaki Otagiri<sup>4</sup>, Tatsuhiko Ishida<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Tokushima Univ., <sup>2</sup>Fac. Pharm. Sci., Wakayama Medical Univ., <sup>3</sup>Fac. Pharm. Sci., Kumamoto Univ., <sup>4</sup> Fac. Pharm, Sojo Univ.)
- P-084 Morphinone, an electrophilic metabolite of morphine, activates the expression of xenobiotic-metabolizing genes in human hepatoma HepG2 cells**  
 ○ Kohei Matsuo, Daisuke Aibara, Kimihiko Matsusue  
 (Fac. Pharmaceut. Sci., Fukuoka. Univ.)

- P-085 Epigenetic effects of maternal exposure to TCDD**  
○ Mana Fujimoto<sup>1</sup>, Hiroe Sano<sup>1</sup>, Ren-Shi Li<sup>1,2</sup>, Hong-Bin Chen<sup>1</sup>, Takayuki Koga<sup>3</sup>, Tomoki Takeda<sup>1,4</sup>, Yoshitaka Tanaka<sup>1</sup>, Yuji Ishii<sup>1</sup>  
(<sup>1</sup>Grad Sch Pharm Sci, Kyushu Univ., <sup>2</sup>China Pharm Univ., <sup>3</sup>Daiichi Univ. Pharmacy, <sup>4</sup>Japan Bioassay Research Center)
- P-086 Analysis of the effects of long-term exposure to microplastics in mice using behavioral toxicity tests**  
○ Ryota Yamagata, Ryohei Furui, Kazunari Endo, Maho Takeda, Gi-Wook Hwang  
(Fac. of Pharmaceut. Sci., Tohoku Med. Pharmaceut. Univ.)
- P-087 Immunohistological analysis of methylmercury-exposed rat DRG: The possibility of sensory neurogenesis in the recovery period**  
○ Marika Abe<sup>1,2</sup>, Tsutomu Takahashi<sup>2</sup>, Yayoi Tsuneoka<sup>2</sup>, Yasuyuki Fujiwara<sup>2</sup>, Toshiyuki Kaji<sup>3</sup>, Yo Shinoda<sup>2</sup>  
(<sup>1</sup>Shibuya Senior High, <sup>2</sup>Sch. Pharm., Tokyo Univ. Pharm. Life Sci., <sup>3</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-088 Species-specific adverse effects of phthalate esters: Key protein structures that cause human-specific TRPA1 activation**  
○ Yoko Mori<sup>1</sup>, Akira Aoki<sup>1</sup>, Yoshinori Okamoto<sup>1</sup>, Takashi Isobe<sup>2</sup>, Susumu Ohkawara<sup>2</sup>, Nobumitsu Hanioka<sup>2</sup>, Toshiko Tanaka-Kagawa<sup>2</sup>, Hideto Jinno<sup>1</sup>  
(<sup>1</sup> Faculty of Pharmacy, Meijo University, <sup>2</sup> Yokohama University of Pharmacy)
- P-089 A single amino acid mutation in the *Mytilus galloprovincialis* Retinoid X receptor affected its ligand specificity**  
○ Ryoichi Tsutsui<sup>1</sup>, Youhei Hiromori<sup>1,2</sup>, Keishi Ishida<sup>1</sup>, Daisuke Matsumaru<sup>1</sup>, Hisamitsu Nagase<sup>1,3</sup>, Minoru Hamada<sup>4</sup>, Takeshi Kikuta<sup>4</sup>, Yasuyuki Nogata<sup>5</sup>, Tsuyoshi Nakanishi<sup>1</sup>  
(<sup>1</sup>Gifu Pharm. Univ., <sup>2</sup> Fac. Pharm. Sci., Suzuka Med. Sci. Univ., <sup>3</sup> Fac. Pharm. Sci., Gifu Univ. of Med. Sci., <sup>4</sup>Chubu Electric Power Co., Inc., <sup>5</sup>Central Research Institute of Electric Power Industry.)
- P-090 Investigation of the effects of PPCPs on plant seed germination and growth**  
Reiji Sadamatsu, Taro Imura, Youki Miyano, Ryosuke Tarumoto, Nako Higaki, Ayaka Hirakawa, Ryo Shimizu, ○ Kazumi Sugihara  
(Faculty of Pharmaceutical Sciences, Hiroshima International University)

- P-091 Synthesis and evaluation of a 1,2-naphthoquinone derivative with anticancer activity: From air pollutants to medicine**  
○ Hiroshi Tateishi<sup>1</sup>, Riko Nakagawa<sup>1</sup>, Mohamed O. Radwan<sup>1</sup>, Takuma Chinen<sup>1</sup>, Halilibrahim Ciftci<sup>2</sup>, Kana Iwamaru<sup>1</sup>, Ryoko Koga<sup>1</sup>, Tsugumasa Toma<sup>1</sup>, Kazuo Umezawa<sup>3</sup>, Masami Otsuka<sup>1,2</sup>, Mikako Fujita<sup>1</sup>  
(<sup>1</sup> Grad. Sch. Pharm. Sci., Kumamoto Univ, <sup>2</sup> Science Farm Ltd., <sup>3</sup> Fac. Med., Aichi Med. Univ.)
- P-092 Chemical biology of 1,4-naphthoquinone with specific antibody against this atmospheric electrophile**  
○ Reiko Hirose<sup>1</sup>, Yumi Abiko<sup>2</sup>, Yasuhiro Shinkai<sup>1</sup>, Yoshito Kumagai<sup>1</sup>  
(<sup>1</sup> Fac. Med., Univ. of Tsukuba, <sup>2</sup> Sch. Pharm. Sci., Nagasaki Univ.)
- P-093 An evaluation of the endocrine disrupting effects of 9,9-bis(4-hydroxyphenyl)-fluorene, a substitute of bisphenol A**  
○ Rai Yamagiwa, Masataka Kunitani, Keishi Ishida, Daisuke Matsumaru, Tsuyoshi Nakanishi  
(Gifu Pharm. Univ.)
- P-094 Study of new approaches to hazard assessment of reproductive and developmental toxicants**  
○ Hideko Sone<sup>1</sup>, Satoshi Otsuka<sup>2</sup>, Yumi Namiki<sup>1</sup>, Kengo Matsuba<sup>1</sup>, Kosuke Hayamizu<sup>1</sup>  
(<sup>1</sup> Fac. Pharm. Sci., Univ. Pharm. Yokohama, <sup>2</sup> Medical Sciences, Tokyo University)
- P-095 Changes of blood-brain barrier and brain parenchymal protein expression levels of high-fat diet induced mice**  
○ Shingo Ito<sup>1,2</sup>, Seiryō Ogata<sup>2</sup>, Takeshi Masuda<sup>1,2</sup>, Sumio Ohtsuki<sup>1,2</sup>  
(<sup>1</sup> Fac. of Life Sci., Kumamoto Univ, <sup>2</sup> Grad. Sch. Pharm. Sci., Kumamoto Univ.)
- P-096 Expression of thioredoxin-interacting protein (TXNIP) in the brain of APP knock-in AD model mice**  
○ Saki Ito<sup>1</sup>, Kotaro Ishibashi<sup>1</sup>, Wei Dai<sup>1</sup>, Hiroaki Takemoto<sup>1</sup>, Hikaru Kasuya<sup>1</sup>, Takashi Saito<sup>2,3</sup>, Takaomi C. Saido<sup>3</sup>, Kiyomitsu Nemoto<sup>1</sup>  
(<sup>1</sup> Fac. Pharm. Sci., Toho Univ, <sup>2</sup> Grad. Sch. Med. Sci., Nagoya City Univ., <sup>3</sup> RIKEN Center for Brain Sci.)
- P-097 Investigation of the effects of parkinsonian neurotoxin 1BnTIQ on the autophagy-lysosome system.**  
○ Yusuke Kojima, Masatsugu Miyara, Natsumi Okada, Yaichiro Kotake  
(Grad. Sch. Of Biomed. and Health Sci., Hiroshima Univ.)



- P-098 The time-dependent changing of microglia, macrophage, and neurons in MeHg-exposed rat dorsal root ganglion**  
○ Yuka Sekiguchi<sup>1</sup>, Ayaka Matsuki<sup>1</sup>, Yayoi Tsuneoka<sup>1</sup>, Tsutomu Takahashi<sup>1</sup>, Yasuyuki Fujiwara<sup>1</sup>, Toshiyuki Kaji<sup>2</sup>, Yo Shinoda<sup>1</sup>  
(<sup>1</sup>Sch. Pharm. Tokyo Univ. Pharm. Life Sci., <sup>2</sup>Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-099 Development of scavengers that catch an intracellular toxic substance 4-HNE**  
○ Miyu Anraku<sup>1</sup>, Kodai Matsuhisa<sup>1</sup>, Taha F.S. Ali<sup>1,2</sup>, Kei Noguchi<sup>3</sup>, Naomi Taira<sup>1</sup>, Ryoko Koga<sup>1</sup>, Tomiki Yamasaki<sup>1</sup>, Motohiro Morioka<sup>3</sup>, Mikako Fujita<sup>1</sup>, Hiroshi Tateishi<sup>1</sup>, Masami Otsuka<sup>1,3</sup>  
(<sup>1</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>Fac. Pharm. Sci., Minia Univ., <sup>3</sup>Fac. Med., Kurume Univ., <sup>4</sup>Science Farm Ltd.)
- P-100 Cellular toxicity of the novel causal candidates of Minamata disease –  $\alpha$ -mercuri-acetaldehyde and  $\alpha$ -mercuri-acetic acid –**  
○ Shun Kouno<sup>1</sup>, Takumi Katsuzawa<sup>1</sup>, Sachie Arae<sup>2</sup>, Ryo Irie<sup>2</sup>, Yuuki Fujimoto<sup>1</sup>, Yayoi Tsuneoka<sup>1</sup>, Tsutomu Takahashi<sup>1</sup>, Yasuyuki Fujiwara<sup>1</sup>, Yo Shinoda<sup>1</sup>  
(<sup>1</sup>Sch. Pharm., Tokyo Univ. Pharm. Life Sci., <sup>2</sup>Fac. Adv. Sci. Tech., Kumamoto Univ.)
- P-101 Study of new approaches to hazard assessment of reproductive and developmental toxicants**  
○ Tsunehiko Hongen<sup>1</sup>, Miku Ohmura<sup>1</sup>, Tomohiro Ito<sup>2</sup>, Kohsuke Hayamizu<sup>1</sup>, Hideko Sone<sup>1</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Univ. Pharm. Yokohama, <sup>2</sup>National Institute for Environmental Studies)
- P-102 High-selective quantification of endogenous acetylcholine level using a differential ion-mobility spectrometry**  
○ Yoshinori Okamoto, Koudai Kitaichi, Yoko Mori, Akira Aoki, Hideto Jinno  
(Fac. Pharm., Meijo Univ)
- P-103 Characterization of biogenic mercury selenide nanoparticles by asymmetric flow field flow fractionation (AF4) hyphenated with ICP-MS**  
○ Makiko Iwase<sup>1</sup>, Yu-ki Tanaka<sup>2</sup>, Yasunori Fukumoto<sup>2</sup>, Noriyuki Suzuki<sup>2</sup>, Yasumitsu Ogra<sup>2</sup>  
(<sup>1</sup>Grad. Sch. Med. Pharm. Sci., <sup>2</sup>Grad. Sch. Pharm. Sci., Chiba Univ.)

- P-104 Validation of high-resolution melting-based assay for the identification of SARS-CoV-2 N501Y variant.**  
 ○ Akira Aoki<sup>1</sup>, Hirokazu Adachi<sup>2</sup>, Yoko Mori<sup>1</sup>, Miyabi Itou<sup>2</sup>, Katsuhiko Sato<sup>2</sup>, Masahiro Kinoshita<sup>2</sup>, Masahiro Kuriki<sup>2</sup>, Kenji Okuda<sup>2,3</sup>, Toru Sakakibara<sup>2,4</sup>, Yoshinori Okamoto<sup>1</sup>, Hideto Jinno<sup>1</sup>  
 (<sup>1</sup>Fac. Pharm., Meijo Univ., <sup>2</sup>Aichi Pref. Inst. Public Health, <sup>3</sup>Handa Health Center, <sup>4</sup>Nishio Health Center)
- P-105 Azaphilones as the heat shock protein inhibitors produced by *Penicillium maximae***  
 ○ Takahiro Matsumoto, Erika Ohnishi, Takahiro Kitagawa, Tetsushi Watanabe  
 (Kyoto Pharmaceutical University)
- P-106 Exacerbating and preventive effect of aberrant light/dark conditions on the toxicity of corticosterone**  
 ○ Hiroshi Kawai, Koki Takeda, Reiko Iwadate  
 (Fac. Pharm. Pharmaceut. Sci., Josai Univ.)
- P-107 Association between clusters of serum fatty acid patterns and prevalence of fatty liver disease.**  
 ○ Yuka Nagase<sup>1</sup>, Kentaro Oniki<sup>2</sup>, Takao Satoh<sup>3</sup>, Kana Kuramoto<sup>1</sup>, Erika Matsumoto<sup>1</sup>, Naoto Tokumaru<sup>1</sup>, Minoru Yoshida<sup>4</sup>, Junji Saruwatari<sup>2</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Kumamoto Univ., <sup>2</sup>Grad. Sch. Pharm. Sci. Kumamoto Univ., <sup>3</sup>Kumamoto Ind. Res. Ins., <sup>4</sup>Jap. Red Cross Kumamoto Health Care Cent.)
- P-108 Correlation between changes in cerebrospinal fluid protein profiles and brain injury grades in a neonatal model of hypoxic-ischemic encephalopathy.**  
 ○ Atsuto Onoda<sup>1,2</sup>, Kazuto Ueda<sup>2</sup>, Ken Tachibana<sup>1</sup>, Ken Takeda<sup>1</sup>, Masahiro Hayakawa<sup>2</sup>, Yoshiaki Sato<sup>2</sup>  
 (<sup>1</sup>Dep. Pharma., Sanyo-Onoda city Univ., <sup>2</sup>Cent. Mat-Neonate., Nagoya Univ. Hosp.)
- P-109 Age-related changes in urination function and effects of a short-term enriched environment in drug-induced menopausal model mice**  
 ○ Fumio Soeda, Shiro Terasaki, Mizuki Abe, Midori Kumagai, Shuuki Moriyama, Takayuki Koga, Yuko Kobuke  
 (Daiichi Univ. Pharm.)
- P-110 Identification of pomegranate-derived amyloid breakers that contribute to the prophylaxis of ATTRwt amyloidosis**  
 ○ Asuka Kagami, Ryoko Sasaki, Devkota Hari Prasad, Syoya Tanaka, Mary Ann Suico, Hirofumi Kai, Tsuyoshi Syuto  
 (Graduate school of Pharmaceutical Sciences, Kumamoto University)

- P-111 Antiproliferative activity of the alkaloids isolated from *Sinomenium acutum* against cancer stem cells**  
 ○ Chizu Saito<sup>1</sup>, Takahiro Matsumoto<sup>1</sup>, Takahiro Kitagawa<sup>1</sup>, Tomoe Ohta<sup>2</sup>, Tatsusada Yoshida<sup>2</sup>, Tetsushi Watanabe<sup>1</sup>  
 (<sup>1</sup>Kyoto Pharmaceutical University, <sup>2</sup>Nagasaki International University.)
- P-112 Induction of cancer cell death via suppression of HSP105 expression by new components isolated from whole plants of *Hypericum erectum***  
 ○ Miho Hamai, Takahiro Matsumoto, Daisuke Imahori, Erika Ohnishi, Tetsushi Watanabe  
 (Kyoto Pharm. Univ.)
- P-113 Machine learning for developing the appropriate clinical approach to avoid polypharmacy: A study focused on swallowing function in the elderly patients**  
 ○ Keiichi Shigetome<sup>1</sup>, Kentaro Oniki<sup>2</sup>, Keiji Takata<sup>3</sup>, Yuki Tateyama<sup>3</sup>, Hiroki Yasuda<sup>3</sup>, Miu Yokota<sup>3</sup>, Sae Yamauchi<sup>3</sup>, Kazunori Yamada<sup>4</sup>, Junji Saruwatari<sup>2</sup>  
 (<sup>1</sup>Fac. Pharm. Sci., Kumamoto Univ, <sup>2</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ, <sup>3</sup>Sakurajyuji Hosp., <sup>4</sup>Grad. Sch. Infor. Sci., Tohoku Univ.)
- P-114 Exploration of differentiation-regulating phospholipids during gastrulation using MS imaging.**  
 ○ Taiga Iwama<sup>1</sup>, Kuniyuki Kano<sup>1</sup>, Nanoka Suzuki<sup>2</sup>, Makoto Suzuki<sup>2</sup>, Hajime Ogino<sup>2</sup>, Junken Aoki<sup>1</sup>  
 (<sup>1</sup>Grad. Sch. Pharm. Sci., Univ. Tokyo, <sup>2</sup> Amphibian Research Center, Hiroshima Univ)
- P-115 Metabolomic profiling of plasma from middle-aged and advanced-age male mice reveals the metabolic abnormalities of carnitine biosynthesis in metallothionein gene knockout mice.**  
 ○ Yoshito Kadota<sup>1</sup>, Asuka Yano<sup>1</sup>, Takashige Kawakami<sup>2</sup>, Shinya Suzuki<sup>1</sup>  
 (<sup>1</sup>Pub. Health, Fac. Pharm. Sci., Tokushima Bunri Univ., <sup>2</sup>Func. Morphol, Fac. Pharm. Sci., Tokushima Bunri Univ.)
- P-116 Determination of residual monomers in gel nails and evaluation of their cytotoxicity and skin sensitization**  
 ○ Kazuo Isama, Yuki Inaba  
 (Fac. Pharm. Sci., Teikyo Heisei Univ.)
- P-117 Silver nanoparticles suppress forskolin-induced syncytialization in BeWo cells**  
 ○ Kazuma Higashisaka<sup>1,2</sup>, Yuji Sakahashi<sup>1</sup>, Go Kitahara<sup>1</sup>, Rina Izutani<sup>1</sup>, Jyundai Kobayashi<sup>1</sup>, Yurina Nakamoto<sup>1</sup>, Jiwon Seo<sup>1</sup>, Rena Yamamoto<sup>1</sup>, Hirofumi Tsujino<sup>1,3</sup>, Yuya Haga<sup>1</sup>, Yasuo Tsutsumi<sup>1,4</sup>  
 (<sup>1</sup> Grad. Sch. Pharm. Sci., Osaka Univ., <sup>2</sup> Inst. Adv. Co-Creation Stud., Osaka Univ., <sup>3</sup>Museum, Osaka Univ., <sup>4</sup>MEIC, Osaka Univ.)

- P-118 Supramolecular hydrogels as stabilizing agents for antibody drugs**  
○ Uta Nishikokubaru<sup>1</sup>, Naoko Ohshita<sup>1</sup>, Toru Taharabaru<sup>1</sup>, Risako Onodera<sup>1</sup>, Keiichi Motoyama<sup>1</sup>, Taishi Higashi<sup>1,2</sup>  
(<sup>1</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>Prior. Org. Innov. Excel., Kumamoto Univ.)
- P-119 Intracellular delivery of Cas9 ribonucleoprotein using transformable polymer and its mechanism**  
○ Reina Katanosaka<sup>1</sup>, Toru Taharabaru<sup>1</sup>, Takuya Kihara<sup>1</sup>, Risako Onodera<sup>1</sup>, Keiichi Motoyama<sup>1</sup>, Taishi Higashi<sup>1,2</sup>  
(<sup>1</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>Prior. Org. Innov. Excel., Kumamoto Univ.)
- P-120 Transformable polymer as intracellular delivery carriers for nucleic acid drugs**  
○ Airi Obata<sup>1</sup>, Toru Taharabaru<sup>1</sup>, Takuya Kihara<sup>1</sup>, Risako Onodera<sup>1</sup>, Keiichi Motoyama<sup>1</sup>, Taishi Higashi<sup>1,2</sup>  
(<sup>1</sup>Grad. Sch. Pharm. Sci., Kumamoto Univ., <sup>2</sup>Prior. Org. Innov. Excel., Kumamoto Univ.)
- P-121 Determination of harmful chemical substances contained in mainstream smoke from cigarette heated device**  
○ Yohei Inaba<sup>1</sup>, Eriko Sudo<sup>2</sup>, Bekki Kanae<sup>1</sup>, Shigehisa Uchiyama<sup>1</sup>, Akira Ushiyama<sup>1</sup>  
(<sup>1</sup>Dept. Env Health, National Institute of Public Health, <sup>2</sup>Fac. Pharm. Sci., Meiji Pharm. Univ.)
- P-122 Differences in Recovery Rates of Wiping Methods by Injectable Anticancer Drugs and Medical Gloves**  
○ Yuki Yanagisawa, Kazuo Isama  
(Fac. Pharm. Sci., Teikyo Heisei Univ.)
- P-123 Volatile organic compounds emitted from non-medical face masks**  
○ Naohiro Oshima, Natsuko Takahashi, Mihono Takagi, Tomoko Obama, Maiko Tahara, Tsuyoshi Kawakami, Shinobu Sakai, Yoshiaki Ikarashi  
(NIHS)
- P-124 No biological hazard was observed with exposure to intermediate frequency magnetic field.**  
○ Kenji Hattori<sup>1</sup>, Shin Ohtani<sup>1</sup>, Akira Ushiyama<sup>2</sup>, Yukihisa Suzuki<sup>3</sup>, Keiji Wada<sup>3</sup>  
(<sup>1</sup>Fac. Pharm. Sci., Meiji Pharm. Univ., <sup>2</sup>Dep. Env. Health, NIPH, <sup>3</sup>Grad. School of Systems Design, Tokyo Metropolitan Univ.)

## From Korea and Other Countries

**P-125 Biological impact of organotin compounds via PPAR/RXR in *Patella sp.* (Mollusca)**

○ Ana M.F. Capitão<sup>1,†</sup>, Daisuke Matsumaru<sup>2,†</sup>, Mónica Lopes-Marques<sup>1</sup>,  
Inês Páscoa<sup>1</sup>, S.B. Sainath<sup>1</sup>, Youhei Hiromori<sup>2,3</sup>, Tsuyoshi Nakanishi<sup>2</sup>,  
Raquel Ruivo<sup>1</sup>, Miguel M. Santos<sup>1</sup>, L. Filipe C. Castro<sup>1</sup>  
(<sup>1</sup>CIIMAR/CIMAR, Univ. of Porto, <sup>2</sup>Gifu Pharm Univ., <sup>3</sup>Fac. of Pharm Sci., Suzuka  
Univ. of Med Sci., <sup>†</sup> These authors contributed equally to the work.)

**P-126 Protective role of Cadmium-induced autophagy in renal mesangial cells**

○ Douglas M. Templeton<sup>1</sup>, Hitomi Fujishiro<sup>2</sup>  
(<sup>1</sup>Department of Laboratory Medicine and Pathobiology, University of Toronto, Canada,  
<sup>2</sup>Laboratory of Metal Toxicology, Faculty of Pharmaceutical Sciences, Tokushima Bunri  
University, Japan)

**P-127 Disruption of estrogen signaling pathway by triphenyl phosphate leads to decline of ovarian reserve and delayed puberty.**

○ Haojia Ma<sup>1,†</sup>, Keishi Ishida<sup>2,†</sup>, Chenke Xu<sup>1</sup>, Kyosuke Takahashi<sup>2</sup>,  
Yu Li<sup>1</sup>, Chenhao Zhang<sup>1</sup>, Qiyue Kang<sup>1</sup>, Yingting Jia<sup>1</sup>, Wenxin Hu<sup>1</sup>,  
Daisuke Matsumaru<sup>2</sup>, Tsuyoshi Nakanishi<sup>2</sup>, Jianying Hu<sup>1</sup>  
(<sup>1</sup>Col. of Urban & Environ. Sci., Peking Univ., <sup>2</sup>Gifu Pharm Univ., <sup>†</sup> These authors  
contributed equally to the work.)

**P-128 Periostin is a possible biomarker for arsenic-induced asthma and skin lesions in Bangladesh**

○ Khaled Hossain<sup>1</sup>, Seiichiro Himeno<sup>2,3</sup>  
(<sup>1</sup>Rajshahi University, Bangladesh, <sup>2</sup>Tokushima Bunri University, Japan, <sup>3</sup>Showa  
University, Japan)