

Day 1 AM (June 30 (Thu))

Room 1

Invited Lecture June 30 (Thu) 9:30 - 10:30 Room 1

Chair: Mayumi ISHIZUKA (Laboratory of Toxicology, Faculty of Veterinary Medicine, Hokkaido University)

IL The Potential of Environmental Toxicology for Promoting One Health

Hisato IWATA (Center for Marine Environmental Studies, Ehime University)

Special Lecture June 30 (Thu) 10:45 - 11:45 Room 1

Chair: Masahiko SATOH (School of Pharmacy, Aichi Gakuin University)

SL Effects of methylmercury exposure on fetuses

Mineshi SAKAMOTO (National Institute for Minamata Disease)

Room 2

Symposium 1 June 30 (Thu) 9:30 - 11:30 Room 2

Further Development of MPS: Over the Devil River and Valley of Death

Chairs: Seiichi ISHIDA (Graduate School of Engineering, Department of Life Science, Sojo University)

Tetsuro ARAKI (Toxicological Research Laboratories, Translational Research Unit, R&D Division, Kyowa Kirin Co., Ltd.)

S1-1 Development of liver-on-s-chips with blood vessels and bile ducts for pharmaceutical research

9:30 - 9:50

Kazuo TAKAYAMA^{1,2} (¹Center for iPS Cell Research and Application, Kyoto University, ²AMED-CREST)

S1-2 Development of two-organ connected device conducted by AMED-MPS Project

9:50 - 10:10

Tamihide MATSUNAGA (Department of Clinical Pharmacy, Graduate School of Pharmaceutical Sciences, Nagoya City University)

S1-3 Long-term non-invasive monitoring of cytotoxicity in a new microphysiological system of the liver

10:10 - 10:30

Hiroyuki MORIGUCHI^{1,2} (¹Stem Cell Evaluation Technology Research Association, ²Astellas Pharma Inc.)

S1-4 Discussion of MPS development issues from a regulatory science perspective

10:30 - 10:50

Seiichi ISHIDA (Graduate School of Engineering, Department of Life Science, Sojo University)

S1-5 Assay platform of Organ-on-a-chip for drug discovery

10:50 - 11:10

Paul VULTO (Chief Executive Officer & co-founder at MIMETAS)

Discussion

11:10 - 11:30

Room 3

Symposium 2

June 30 (Thu) 9:30 - 11:30 Room 3

Case study: Is the information on the on-target toxicity of knockout mouse useful for the development of the candidate compound?**Chairs:** Hideo FUKUI (Axcelead Drug Discovery Partners, Inc.)

Kazuhiko MORI (Daiichi Sankyo RD Novare Co., Ltd.)

S2-1 Application of gene-modified animals or cultured cells for toxicity profiling and on-or off-target toxicity identification

9:30 - 10:00

Kazunori FUJIMOTO (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)

S2-2 ROR γ t inhibitor: drug efficacy and risk of side effects

10:00 - 10:30

Azumi UEYAMA (Shionogi & Co., Ltd)

S2-3 Generation of humanized mouse using genome editing and its application

10:30 - 11:00

Satoru TAKAHASHI (Transborder Medical Research Center, Faculty of Medicine, University of Tsukuba)

S2-4 Creation and analysis of PKD1 knock-out cynomolgus monkeys and the future direction

11:00 - 11:30

Masatsugu EMA (Research Center of Animal Life Science, Shiga University of Medical Science)

Room 4

Symposium 3

June 30 (Thu) 9:30 - 11:30 Room 4

Current genotoxic research: Hazard identification and risk assessment for protection against genome instability**Chairs:** Kei-ichi SUGIYAMA (Division of Genetics and Mutagenesis, Center for Biological Safety and Research, National Institute of Health Sciences)

Masayuki MISHIMA (Translational Research Division, Chugai Pharmaceutical)

Introduction

9:30 - 9:35

Kei-ichi SUGIYAMA (Division of Genetics and Mutagenesis, Center for Biological Safety and Research, National Institute of Health Sciences)

S3-1 Genotoxicity assessment of new modality drugs

9:35 - 9:58

Masayuki MISHIMA (Translational Research Division, Chugai Pharmaceutical)

S3-2 Risk Assessment and Quality Control of Trace Mutagenic Impurities Triggered by the Nitrosamine Contamination Issue

9:58 - 10:21

Kiyohiro HASHIMOTO (Drug Safety Research and Evaluation, Takeda Pharmaceutical Co., Ltd.)

S3-3 Current Status and Future Prospects of Genotoxicity Assessment of Chemicals Using Multidisciplinary approach

10:21 - 10:44

Yukari TOTSUKA^{1,2} (¹Laboratory of Environmental Toxicology and Carcinogenesis, Nihon University School of Pharmacy, ²National Cancer Center Research Institute)**S3-4 "On-target toxicity of genome editing" micronucleus induction and chromothripsis**

10:44 - 11:07

Takayoshi SUZUKI (Division of Molecular Target and Gene Therapy Products, National Institute of Health Sciences)

S3-5 Effect of a toxic compound derived from glycolysis on nuclear division and nuclear morphology in yeast

11:07 - 11:30

Yoshiharu INOUE (Division of Applied Life Sciences, Graduate School of Agriculture, Kyoto University)

Room 5

Symposium 4

June 30 (Thu) 9:30 - 11:30 Room 5

Further utilization of clinical and non-clinical CDISC standard data in new drug development

Chairs: Osamu FUEKI (Pharmaceuticals and Medical Devices Agency)

Mutsumi SUZUKI (Kyowa Kirin Co., Ltd. R&D Division, Translational Research Unit, Toxicological Research Laboratories)

Introduction

9:30 - 9:35

S4-1 SEND and its utilization

9:35 - 9:55

Gen SATO (Global Nonclinical Regulatory Affairs, Eisai Co., Ltd.)

S4-2 Expectations for the future with the CDISC standard rooted

9:55 - 10:15

Osamu KOMIYAMA (Japan Pharmaceutical Manufacturers Association (JPMA))

S4-3 Submission and utilization of CDISC standardized data for new drug application

10:15 - 10:35

Yuki ANDO (Pharmaceuticals and Medical Devices Agency)

S4-4 Progresses and future plans on the development of the PMDA-database

10:35 - 11:00

Hiroshi KASUGA (Pharmaceuticals and Medical Devices Agency)

Discussion

11:00 - 11:25

Conclusion

11:25 - 11:30

Room 6

Symposium 5

June 30 (Thu) 9:30 - 11:30 Room 6

KSOT-JSOT Joint Symposium: Update on lung toxicity

Chairs: Byung-Sun CHOI (College of Medicine, Chung-Ang University)

Gi-Wook HWANG (Faculty of Pharmaceutical Sciences, Tohoku Medical and Pharmaceutical University)

Opening Remark

9:30 - 9:32

S5-1 Inhalation Toxicity Studies for Chloromethylisothiazolinone and Methylisothiazolinone (CMIT/MIT)

9:32 - 10:01

Kyuhong LEE^{1,2,3} (¹Inhalation Toxicology Center for Airborne Risk Factor, Korea Institute of Toxicology, ²Department of Human and Environmental Toxicology, University of Science & Technology, ³Humidifier Disinfectant Health Center⁴, College of Pharmacy, Ewha Womans University)

S5-2 Adverse health effects of humidifier disinfectants in Korea: toxic mechanism of polyhexamethylene guanidine phosphate

10:01 - 10:30

Ha Ryong KIM (College of Pharmacy, Daegu Catholic University)

S5-3 Pulmonary toxicity of nanomaterials and particles

10:30 - 10:59

Gaku ICHIHARA (Tokyo University of Science)

S5-4 Impacts of silica and asbestos exposure on immune functions and related diseases

10:59 - 11:28

Yasumitsu NISHIMURA (Department of Hygiene, Kawasaki Medical School)

Closing Remark

11:28 - 11:30

Room 7

Symposium 6

June 30 (Thu) 9:30 - 11:30 Room 7

Impact assessment of chemicals on environmental organisms**Chairs: Satoshi FURUKAWA** (Biological Research Laboratories, Nissan Chemical Corporation)**Kosei INUI** (Ishihara Sangyo Kaisha, Ltd.)**Introduction**

9:30 - 9:35

Kosei INUI (Ishihara Sangyo Kaisha, Ltd.)

S6-1 Endocrine Disrupting Effects Evaluated in Fish Short Term Reproduction Assay

9:35 - 9:55

Kota IRIE (Nissan Chemical Corporation)

S6-2 The Amphibian Metamorphosis Assay

9:55 - 10:20

Itaru YAMAMOTO (Safety Science Research Laboratory, Central Research Institute, Ishihara Sangyo Kaisha, LTD.)

S6-3 Current and future environmental risk assessment studies of pesticides on bees in Europe

10:20 - 10:55

Tatsuya SEKINE (ibacon GmbH)

S6-4 Molluscs in toxicology testing emphasizing snails

10:55 - 11:30

Klaus WEBER (AnaPath Services GmbH, Switzerland)

Room 8

Candidates for the Excellent Presentation Award (Oral)

June 30 (Thu) 9:30 - 11:06 Room 8

Candidates for the Excellent Presentation Award (Oral) 1**Chairs: Yuhji TAQUAHASHI** (Division of Cellular and Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)**Hideshi TSUSAKI** (Shin Nippon Biomedical Laboratories, Ltd.)**Pharmaceutical drugs (chemicals)****P-1E Numerization of pathological images by representation learning oriented to support non-clinical studies**

9:30 - 9:36

Tadahaya MIZUNO (Laboratory of Molecular Pharmacokinetics Graduate School of Pharmaceutical Sciences The University of Tokyo)

P-2E Withdrawal**Biopharmaceuticals****P-3E Using in vivo two-photon microscopy to validate the concept that anti-CD137 antibody activated by extracellular ATP reduces systemic immune activation**

9:36 - 9:42

Chisato KANEKO (Translational Research Division, Chugai Pharmaceutical Co., Ltd.)

Agricultural chemicals

P-4E Adverse outcome pathway (AOP)-based approach for assessing the combined neurotoxic effects of multiple pesticides

9:42 - 9:48

Tetsushi HIRANO (Faculty of Pharmaceutical Sciences, University of Toyama)

Metals

P-8E The molecular mechanism of PPAR δ -regulated cadmium renal toxicity

9:48 - 9:54

Chikage MORI (Laboratory of Pharmaceutical Health Sciences, School of Pharmacy, Aichi Gakuin University)

P-10E Molecular mechanism for arsenite-mediated dysfunction of blood-coagulation systems in human vascular endothelial cells and smooth muscle cells

9:54 - 10:00

Tsuyoshi NAKANO (Department of Environmental Health, Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-12E Molecular mechanism of arsenic-induced hypertension: Inhibition of the vasoprotective axes of the renin-angiotensin system by arsenite

10:00 - 10:06

Md. Shiblur RAHAMAN^{1,2} (¹Department of Environmental and Preventive Medicine, Jichi Medical University, ²Department of Environmental Science and Disaster Management, Noakhali Science and Technology University)

Environmental pollutants

P-17E Characterization of clotting factor IX splicing variant 2 by cultured cell method and AlphaFold2

10:06 - 10:12

Kanami WATANABE (Division of Toxicology, Department of Veterinary Medicine, Kitasato University)

P-19E Novel applications of used tea leaves that contribute to reduction of environmental toxicity

10:12 - 10:18

Takehiro NAKAMURA (Faculty of Pharmacy, Kindai University)

P-21E Effects of particulate matter exposure on intracellular entry of SARS-CoV-2

10:18 - 10:24

Raga ISHIKAWA (Graduate School of Engineering, Kyoto University)

P-22E Residues of neonicotinoids and fipronil in paddy fields and duck eggs: Do ducks transform and accumulate these substances to egg products?

10:24 - 10:30

Kraisiri KHIDKHAN (Department of Pharmacology, Faculty of Veterinary Medicine, Kasetsart University)

Nanomaterials

P-25E Two-year toxicity study of multi-walled carbon nanotubes (MWCNT) in F344 rats by an intermittent intratracheal administration

10:30 - 10:36

Ai MAENO (Tokyo Metropolitan Institute of Public Health)

Liver

P-32E Elucidation of SARS-CoV-2-induced liver injury using liver-on-a-chips

10:36 - 10:42

Sayaka DEGUCHI (Center for iPS Cell Research and Application (CiRA), Kyoto University)

P-34E Understanding the drug-induced hepatotoxicity in rats —Involvement of the CYP1A1 inhibition-mediated activation of the aryl hydrocarbon receptor (AHR)—

10:42 - 10:48

Tomomi YODA^{1,2} (¹Preclinical Research Unit, Sumitomo Pharma Co., Ltd., ²Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

P-35E Formation mechanism of acetamide-induced large micronuclei in rat hepatocytes

10:48 - 10:54

Norifumi TAKIMOTO^{1,2} (¹Division of Pathology, National Institute of Health Sciences, ²Laboratory of Veterinary Medicine, Tokyo University of Agriculture and Technology)

Other organs or system

P-48E Detailed investigation of bone marrow toxicity induced by anticancer drugs in various animals ②

10:54 - 11:00

Yoko NISHINO (Global Drug Safety, Eisai Co., Ltd.)

P-49E Exploration of a novel pathological factor in peritoneal deterioration induced by long-term peritoneal dialysis

11:00 - 11:06

Taiki MIHARA (Department of Veterinary Pharmacology, Graduate School of Agricultural and Life Sciences, The University of Tokyo)

JSTP-JSOT Joint Symposium: Carcinogenicity evaluation in rasH2 -Tg(tg/wt) mice

Chairs: Kumiko OGAWA (National Institute of Health Sciences)
Masami SUZUKI (Central Institute for Experimental Animals)

Introduction

13:30 - 13:36

S7-1 Revision of ICH S1 Guidelines and rasH2-Tg Mouse

13:36 - 14:03

Kumiko OGAWA (National Institute of Health Sciences)

S7-2 rasH2-Tg mouse: reproducibility and stability of carcinogenicity due to a standardized production and monitoring system

14:03 - 14:30

Masami SUZUKI (Central Institute for Experimental Animals)

S7-3 Pathological Background and Characteristic Lesions in rasH2-Tg Mice

14:30 - 14:57

Toshihisa FUJIWARA (Shin Nippon Biomedical Laboratories, Ltd)

S7-4 Survey of tumorigenic sensitivity for high dose selection by exposure ratios in rasH2-Tg mouse carcinogenicity studies

14:57 - 15:24

Shigeru HISADA^{1,2} (¹Non-Clinical Evaluation Expert Committee, Drug Evaluation Committee, The Japan Pharmaceutical Manufacturers Association, ²ASKA Pharmaceutical Co., Ltd.)

Conclusion

15:24 - 15:30

Assessment for individual susceptibilities to drug on drug safety research

Chair: Tadahiro SHINOZAWA (Global Drug Safety Research and Evaluation, Takeda Pharmaceutical Company)

S8-1 The future of recapitulating individual patients in drug safety

15:30 - 16:00

Tadahiro SHINOZAWA (Global Drug Safety Research and Evaluation, Takeda Pharmaceutical Company)

S8-2 Integration of genomic, omics, and human cell models for biological interpretation of genetic risks

16:00 - 16:30

Masaru KOIDO^{1,2} (¹Laboratory of Complex Trait Genomics, Department of Computational Biology and Medical Sciences, Graduate School of Frontier Sciences, The University of Tokyo, ²Laboratory for Statistical and Translational Genetics, RIKEN Center for Integrative Medical Sciences)

S8-3 Personalized medical care for pediatric drug therapy and pharmacogenomics

16:30 - 17:00

Keiko HIKINO (RIKEN Center for Integrative Medical Sciences)

S8-4 Exploratory research on relationships between gene polymorphisms and individual difference of toxicological sensitivity in non-human primate for nonclinical toxicity studies

17:00 - 17:30

Hiroya KONNO (Medicinal Safety Research Laboratories, R&D Division, DAIICHI SANKYO CO., LTD.)

Cytokine release syndrome still linger with antibody therapy

Chairs: Kazuhiko MORI (Daiichi Sankyo RD Novare Co., Ltd.)

Ken-ichiro NAN-YA (Toxicological Research Laboratories, Translational Research Unit, R&D Division, Kyowa Kirin Co., Ltd.)

S9-1 Introduction, current understanding of CRS

13:30 - 13:40

Masayuki MISHIMA (Translational Research Division, Chugai Pharmaceutical)

S9-2 CRS in the clinical setting

13:40 - 14:05

Yasutoshi KUBOKI (Department of Experimental Therapeutics, National Cancer Center Hospital East)

S9-3 Risk assessment and investigation of underlying mechanisms for therapeutic antibody-induced cytokine release using human immune cells

14:05 - 14:30

Shiho ITO (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., LTD.)

S9-4 A cytokine river in the Death Valley: a case study of clinical cytokine release syndrome (CRS) and limitations of current non-clinical evaluation

14:30 - 14:55

Kaito NIHIRA (Kyowa Kirin Co., Ltd.)

S9-5 Mitigating the risk of cytokine release syndrome induced by T-cell redirecting bispecific antibody

14:55 - 15:20

Yoshika IWATA (Translational Research Division, Chugai Pharmaceutical Co., Ltd.)

Discussion

15:20 - 15:30

Development of new nanomaterial assessment methodologies for inhalation, immunological and cardiovascular toxicities

Chairs: Akihiko HIROSE (National Institute of Health Sciences)

Yuhji TAQUAHASHI (Division of Cellular and Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Introduction

15:30 - 15:33

S10-1 Streamline of chronic inhalation exposure study protocol for nanomaterials

15:33 - 15:57

Yuhji TAQUAHASHI (Division of Cellular and Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

S10-2 Evaluation of the carcinogenicity of nanomaterials using the intratracheal instillation method in rats: Recent developments and issues

15:57 - 16:21

Motoki HOJO (Department of Pharmaceutical and Environmental Sciences, Tokyo Metropolitan Institute of Public Health)

S10-3 Development of an in vitro immunotoxicity assay for nanomaterials by measuring THP-1 cell activation as an indicator

16:21 - 16:45

Takao ASHIKAGA (Division of Risk Assessment, National Institute of Health Sciences)

S10-4 (Nano)particle exposure, acute phase response and cardiovascular disease

16:45 - 17:30

Ulla VOGEL (National Research Centre for the Working Environment)

JSOT-JCA Joint Symposium: Molecular basis for the evolution of the evaluation methods of carcinogenic potentials 2.0

Chairs: Toshikazu USHIJIMA (National Cancer Center Research Institute)

Jun KANNO (National Institute of Health Sciences)

Introduction

13:30 - 13:34

Toshikazu USHIJIMA (National Cancer Center Research Institute)

S11-1 Remodeling of normal and inflamed epithelium

13:34 - 13:58

Seishi OGAWA (Department of Pathology and Tumor Biology, Graduate School of Medicine Kyoto University)

S11-2 Epigenomic alterations in a cellular ecosystem in response to intrinsic and extrinsic factors

13:58 - 14:22

Naoko HATTORI (Division of Epigenomics, National Cancer Center Research Institute)

S11-3 Mutational signatures in the cancer genomes

14:22 - 14:46

Tatsuhiko SHIBATA (Laboratory of Molecular Medicine, Human Genome Center, The Institute of Medical Science, The University of Tokyo)

S11-4 Percellome transcriptomics analysis with epigenetic considerations on carcinogens tested by the "New Repeated Dosing Protocol"

14:46 - 15:10

Jun KANNO (National Institute of Health Sciences, Center for Biological Safety and Research, Division of Cellular and Molecular Toxicology)

Discussion

15:10 - 15:30

JSCT-JSOT Joint Symposium: Recent trends in basic study and clinical application of the cutting-edge technology for vital sign monitoring

Chairs: Manabu SUGITA (Juntendo University Nerima Hospital)

Satoshi KITAJIMA (Division of Cellular & Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

S12-1 It's dream time: Applications of carbon nanotubes to advanced technology products

15:30 - 16:00

Shuji TSURUOKA^{1,2} (¹Shinshu University, ²Siddarmark, LLC)

S12-2 An approach to prediction of mortality in acute toxicity studies by integrated assessment of vital signs

16:00 - 16:25

Yuhji TAQUAHASHI (Division of Cellular and Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

S12-3 The significance of monitoring to predict unforeseen events

16:25 - 16:50

Manabu SUGITA (Juntendo University Nerima Hospital)

S12-4 Vital Signs and symptoms characteristic of patients with poisoning

16:50 - 17:15

Katsura HAYAKAWA (Department of Critical Care Medicine, Toranomon Hospital)

Discussion

17:15 - 17:30

Room 4

Symposium 13

June 30 (Thu) 13:30 - 15:30 Room 4

Current status and prospects of adverse events research in humans utilizing computer science

Chairs: Kaori AMBE (Department of Regulatory Science, Graduate School of Pharmaceutical Sciences, Nagoya City University)

Kouichi YOSHINARI (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

Introduction

13:30 - 13:32

S13-1 Machine learning approach to predict the adverse drug reaction in human

13:32 - 14:01

Kaori AMBE (Department of Regulatory Science, Graduate School of Pharmaceutical Sciences, Nagoya City University)

S13-2 Evaluation and prediction of effects of chemicals on humans using network biology

14:01 - 14:30

Midori IIDA (Department of Bioscience and Bioinformatics, Faculty of Computer Science and Systems Engineering, Kyushu Institute of Technology)

S13-3 Prediction of Drug-Induced Liver Malignant Tumor Based on Big Data Analysis and Computational Toxicology

14:30 - 14:59

Kota KUROSAKI (Department of Medical Molecular Informatics, Meiji Pharmaceutical University)

S13-4 Systematic Analysis of Clinical Trial Data for Personalized Therapy: Effects of Exercise Training in Chronic Heart Failure Patients Depend on Medications and Conditions

14:59 - 15:28

Yukako SOEJIMA^{1,2} (¹Clinical Pharmacology and Pharmacometrics, Graduate School of Pharmaceutical Sciences, Chiba University, ²Regulatory Affairs, Sanofi K.K., Japan)

Conclusion

15:28 - 15:30

Symposium 14

June 30 (Thu) 15:30 - 17:30 Room 4

New aspects of thalidomide study: toward elucidation of species difference based on metabolism

Chairs: Hiroki TERAOKA (Rakuno Gakuen University)

Hiroshi YAMAZAKI (Showa Pharmaceutical University)

Introduction

15:30 - 15:32

Hiroki TERAOKA (Rakuno Gakuen University)

S14-1 A primary metabolite 5-hydroxythalidomide in the rabbit, a thalidomide-sensitive species, but 5'-hydroxythalidomide in not sensitive rats

15:32 - 15:55

Hiroshi YAMAZAKI (Showa Pharmaceutical University)

S14-2 Developmental toxicity of thalidomide in rabbits; possible teratogenic effects on male semen

15:55 - 16:18

Makiko KUWAGATA (Division of Cellular and Molecular Toxicology, CBSR, National Institute of Health and Science)

S14-3 Understanding the Thalidomide Chirality in Biological Processes by the Self-disproportionation of Enantiomer

16:18 - 16:41

Norio SHIBATA (Department of Nanopharmaceutical Sciences, Nagoya Institute of Technology)

S14-4 Alterations in neosubstrate selectivity of cereblon through thalidomide metabolism

16:41 - 17:04

Takuya MIYAKAWA^{1,2} (¹Graduate School of Agricultural and Life Sciences, The University of Tokyo, ²Graduate School of Biostudies, Kyoto University)

S14-5 Augmentation of thalidomide teratogenicity in human CYP3As expressing zebrafish

17:04 - 17:27

Hiroki TERAOKA (Rakuno Gakuen University)

Conclusion

17:27 - 17:30

Hiroshi YAMAZAKI (Showa Pharmaceutical University)

Room 5

Workshop 1

June 30 (Thu) 13:30 - 15:30 Room 5

Current status of in vitro research leading drug discovery and development safety research

Chairs: Hisaharu YAMADA (LSI Medience Corporation Drug Discovery Support Business Headquarters)
Kazunori FUJIMOTO (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)

Introduction

13:30 - 13:40

Hisaharu YAMADA (LSI Medience Corporation Drug Discovery Support Business Headquarters)

W1-1 Experience working with Liver MPS Research of the Texas A&M Tissue Chip Validation (TEX-VAL) Consortium

13:40 - 14:06

Yuki KATO^{1,2} (¹Department of Veterinary Integrative Biosciences, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX, USA, ²Laboratory for Drug Discovery and Development, Shionogi & Co. Ltd., Osaka, Japan)

W1-2 A case study of mechanistic investigation using *in vivo* and *in vitro* studies for toxicological change observed in oligonucleotide development

14:06 - 14:32

Yoshiko OKAI (Takeda Pharmaceutical Company Limited)

W1-3 Study for drug-induced seizure prediction using cultured neurons and microelectrode array - rat primary neurons vs rat *in vivo* model/clinical

14:32 - 14:58

Aoi ODAWARA (Eisai Co., Ltd.)

W1-4 The application of human iPS cells to *in vitro* toxicity assessment in drug research and development in Chugai

14:58 - 15:24

Jumpei KIYOKAWA (Translational Research Division, Chugai Pharmaceutical Co., Ltd.)

Conclusion

15:24 - 15:30

Kazunori FUJIMOTO (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)

Examples, prospects and social meaning of Chrono-toxicology

Chairs: Nobuhiko MIURA (Yokohama University of Pharmacy)

Hiroki YOSHIOKA (Department of Pharmacy, Gifu University of Medical Science)

Symposium Outline

15:30 - 15:35

Nobuhiko MIURA (Yokohama University of Pharmacy)

S15-1 Chronotoxicity of chemical-induced hepatic injury in mice

15:35 - 15:55

Hiroki YOSHIOKA (Department of Pharmacy, Gifu University of Medical Science)

S15-2 Structure and Function of Thermosensitive TRP channels

15:55 - 16:25

Makoto TOMINAGA^{1,2} (¹Division Cell Signaling, National Institute for Physiological Sciences, ²Thermal Biology Group, Exploratory Research Center on Life and Living Systems)

S15-3 Cadmium toxicity, oxidative stress and sleep-wake rhythms

16:25 - 16:55

Masayuki IKEDA (Faculty of Science, University of Toyama)

S15-4 RNA editing enzyme ADAR regulates the circadian expression of xenobiotic transporters in human renal proximal tubular epithelium

16:55 - 17:25

Satoru KOYANAGI^{1,2} (¹Pharmaceutics, Faculty of Pharmaceutical Sciences, Kyushu University, ²Global Healthcare Science, Faculty of Pharmaceutical Sciences, Kyushu University)

Summary

17:25 - 17:30

Nobuhiko MIURA (Yokohama University of Pharmacy)

Room 6

Gene / cell therapy development and its safety assessment

Chairs: Akihito SHIMOI (Ina Research Inc & Center for Advanced Research of Gene and Cell Therapy in Shinshu University)

Toyohiko AOKI (DIMS Institute of Medical Science, Inc.)

S16-1 Infrastructure development for nonclinical safety studies in non-human primates aiming for the clinical application of Japan-made gene and cell therapy

13:30 - 14:00

Yozo NAKAZAWA^{1,2} (¹Department of Pediatrics, Shinshu University School of Medicine, ²Center for Advanced Research of Gene and Cell Therapy, Shinshu University)

S16-2 Lymphodepleted non-human primate model for the assessment of acute on-target and off-tumor toxicity of human CAR-T cells

14:00 - 14:30

Shigeki YAGYU^{1,2} (¹Center for Advanced Research of Gene and Cell Therapy, Shinshu University, ²Department of Pediatrics, Graduate School of Medical Science, Kyoto Prefectural University of Medicine)

S16-3 Current Status and Issues in Safety Evaluation of Gene Therapy Drugs

14:30 - 15:00

Koichi MIYAKE (Department of Gene Therapy, Nippon Medical School)

Clinical adverse events/side effects that are difficult to detect in general toxicity studies -new approaches from nonclinical research Part I (General remarks)

Chairs: Izuru MIYAWAKI (Sumitomo Pharma Co., Ltd.)
Ichiro NAESHIRO (Cmic Holdings Co., Ltd.)

Introduction

15:00 - 15:01

W2-1 How to evaluate clinical adverse events in non-clinical studies- New stage of nonclinical studies- Introduction

15:01 - 15:06

Tamio FUKUSHIMA (Shionogi Co & Ltd.)

W2-2 What investigators of clinical trials desire about nonclinical trial data

15:06 - 15:36

Yuji KUMAGAI^{1,2} (¹Clinical Trial Center, Kitasato University Hospital, ²Japan Association of Contract Institutes for Clinical Pharmacology)

W2-3 Concepts and approach for predicting clinical safety from non-clinical study results -Existing Guidelines and New Modalities-

15:36 - 15:59

Hiroshi ONODERA (National Institute of Health Sciences)

Conclusion

15:59 - 16:00

6/30 PM

Overview of Big Projects on New Approach methods in Japan

Chairs: Hajime KOJIMA (National Institute of Health Sciences)
Takashi YAMADA (Division of Risk Assessment, Center for Biological Safety Research, National Institute of Health Sciences)

Introduction

16:00 - 16:02

S17-1 Meaning of AI-SHIPS Project -Background of development, Idea of design and Perspective

16:02 - 16:27

Kimito FUNATSU (Data Science Center, Nara Institute of Science and Technology)

S17-2 Development of proarrhythmia risk assessment using human iPSC technology and future perspectives

16:27 - 16:52

Yasunari KANDA (Division of Pharmacology, National Institute of Health Sciences)

S17-3 Achievements of AMED-MPS Project and Prospects of MPS research

16:52 - 17:17

Hitoshi NARAOKA (Division of Technology, Stem Cell Evaluation Technology Research Association)

Discussion

17:17 - 17:27

Conclusion

17:27 - 17:30

Biometals Specialty Section Symposium -Approaches to elucidate the mechanisms involved in the arsenic toxicity-

Chairs: Yasuyuki FUJIWARA (Department of Environmental Health, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

Gi-Wook HWANG (Faculty of Pharmaceutical Sciences, Tohoku Medical and Pharmaceutical University)

Introduction

13:30 - 13:34

S18-1 Toxic mechanisms of arsenite on the blood coagulation/fibrinolytic system

13:34 - 14:02

Yasuyuki FUJIWARA (Department of Environmental Health, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

S18-2 Investigation of arsenic toxicity identified from the research of alternative splicing of arsenic (+3 oxidation state) methyltransferase

14:02 - 14:30

Daigo SUMI (Faculty of Pharmaceutical Sciences, Tokushima Bunri University)

S18-3 DNA methylation changes in offspring sperm by gestational arsenic exposure and their inheritance in F2 embryos

14:30 - 14:58

Keiko NOHARA (Health and Environmental Risk Division, National Institute for Environmental Studies)

S18-4 Carcinogenicity and mechanism of action of arsenic

14:58 - 15:26

Hideki WANIBUCHI (Department of Molecular Pathology, Osaka Metropolitan University Graduate School of Medicine)

Conclusion

15:26 - 15:30

Points to consider in selecting a starting dose level for first-in-human clinical trials of novel therapeutic modalities from safety and efficacy perspectives

Chairs: Satoko KAKIUCHI-KIYOTA (Safety Assessment, Genentech)

Keiichiro SATO (Pharmacokinetics and Safety Assessment Dept., Nippon Shinyaku Co., Ltd.)

Satoshi TSUNODA (Pharmaceuticals and Medical Devices Agency)

Introduction

15:30 - 15:35

W3-1 Safety Considerations in First-in-human Studies of Oligonucleotide Therapeutics: A Regulatory Perspective

15:35 - 16:05

Misaki NAOTA (Pharmaceuticals and Medical Devices Agency, Toxicology)

W3-2 Considerations on Toxicological Evaluation in the Development of Next Generation Antibodies: A Regulatory Perspective

16:05 - 16:35

Jihei NISHIMURA (Pharmaceutical and Medical devices Agency)

W3-3 Initial dose at FIH clinical trial in case of oligonucleotide therapeutics

16:35 - 16:50

Keiichiro SATO (Pharmacokinetics and Safety Assessment Dept., Nippon Shinyaku Co., Ltd.)

W3-4 First in human dose selection strategy of bispecific antibodies

16:50 - 17:00

Sho AKAI (Chugai pharmaceutical Co., Ltd. Translational Research Division)

W3-5 FiH starting dose selection strategy of a bispecific non-T-cell engager

17:00 - 17:10

Satoko KAKIUCHI-KIYOTA (Safety Assessment, Genentech)

W3-6 Starting dose in first-in-human clinical trials of vaccine

17:10 - 17:30

- an experience from mRNA vaccine -

Shinji SHIMIZU (DAIICHI SANKYO CO., LTD., Quantitative Clinical Pharmacology)

Room 8

Candidates for the Excellent Presentation Award (Oral) June 30 (Thu) 13:30 - 14:18 Room 8

Candidates for the Excellent Presentation Award (Oral) 2

Chair: Makoto SHIBUTANI (Cooperative Division of Veterinary Sciences, Graduate School of Agriculture, Tokyo University of Agriculture and Technology)

Reproductive and developmental toxicology

P-51E Study on Teratogenicity of Compound X: Inhibition of the Sonic Hedgehog Pathway Induces the Teratogenicity

13:30 - 13:36

Riki KAWAMOTO (Safety Research Laboratories, Ono Pharmaceutical Co., Ltd.)

P-52E Exposure to acephate during early life stages alters sexual maturation and reproductive systems in male and female mice

13:36 - 13:42

Takahiro SASAKI (Laboratory of Animal Reproduction and Development, Graduate School of Agricultural Science, Tohoku University)

P-55E Pediatric drug influences on social behavior in juvenile rats

13:42 - 13:48

Atsunori HATTORI (Laboratory for Drug Discovery and Development, Shionogi & CO., LTD.)

Genetic toxicology

P-59E Examination of automated micronucleus observation using AI-based image analysis

13:48 - 13:54

Takumi NUKAGA (Shiseido Co., Ltd Brand Value R&D Institute)

Carcinogenicity

P-60E The Establishment of the normal dog bladder organoid culture model evaluated the carcinogenic toxicity of chemical substance

13:54 - 14:00

Haru YAMAMOTO^{1,2} (¹Laboratory of Veterinary Pharmacology, Tokyo University of Agriculture and Technology, ²Co., Ltd AIRDEC mini)

Immunotoxicology

P-63E Determination of key residues in MRGPRX2 to enhance pseudo-allergic reactions induced by fluoroquinolones

14:00 - 14:06

Eri HAMAMURA (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)

P-64E Possible interaction of low dose ozone gas exposure with percutaneous oxygen saturation and pro-inflammatory responses in a mouse model of asthma and acute lung injury - Dose response study

14:06 - 14:12

Chiharu OHIRA (Pharmacology Lab, Vet Med, Azabu Univ)

6/30 PM

Cytotoxicity

- P-66E** Pentacyclic triterpenoid ursolic acid induces apoptosis with mitochondrial dysfunction in adult T-cell leukemia MT-4 cells to promote surrounding cell growth
14:12 - 14:18

Mengyue SHEN (University of Occupational and Environmental Health, Japan)

Candidates for the Excellent Presentation Award (Oral) June 30 (Thu) 16:10 - 17:04 Room 8

Candidates for the Excellent Presentation Award (Oral) 3

Chair: Toyohiko AOKI (DIMS Institute of Medical Science, Inc.)

Mechanisms of toxicity

- P-70E** Role of respiratory uncoupling in drug-induced mitochondrial permeability transition
16:10 - 16:16

Akinori TAKEMURA (Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University)

Cellular response

- P-75E** Contribution of the novel noncanonical functions of caspase-3 to the induction of parthanatos
16:16 - 16:22

Shuhei HAMANO (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

Biomarkers

- P-80E** Examination of progression to mice steatohepatitis focusing on the detection of reactive oxygen species using MRI
16:22 - 16:28

Yuka YOSHINO^{1,2} (¹Sumitomo Pharma Co., Ltd, ²Graduate School of Frontier Biosciences, Osaka University)

Toxicity-testing methods

- P-81E** Establishment of an *in vitro* embryotoxicity assay using human iPS cells and its application to toxicity assessment
16:28 - 16:34

Megumi ISHIDA (CHUGAI PHARMACEUTICAL CO., LTD.)

Alternatives to mammalian models

- P-85E** Validation of an artificial neural network model for risk assessment of skin sensitization using *in vitro* tests with metals and unknown structural compounds
16:34 - 16:40

Kosuke IMAI (Shiseido Co., LTD Brand Value R&D Institute)

- P-91E** Reactive oxygen species (ROS) assay without using DMSO
16:40 - 16:46

Toshiyuki OHTAKE (Shiseido Co., Ltd.)

- P-93E** Non-animal testing strategy for assessment of skin sensitization of chemicals combining RhE based Testing Strategy (RTS) and read-across
16:46 - 16:52

Sho SUZUKI (Kao Corporation)

- P-94E** CHARACTERISTICS OF HUMAN IPSC-DERIVED SENSORY NEURONS AND ASSESSMENT OF DRUG RESPONSIVENESS
16:52 - 16:58

Minami HIRANUMA (ReproCELL, Inc)

Clinical toxicology

- P-95E** Consequences of medication errors in children
16:58 - 17:04

Phantakan TANSUWANNARAT (Ramathibodi Hospital Mahidol University)

Day 2 AM (July 1 (Fri))

Room 1

Educational Lecture 1

July 1 (Fri) 9:00 - 9:50 Room 1

Chair: Satoshi KITAJIMA (Division of Cellular & Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

EL1 Safety evaluation of medicinal drug as a life science

Ikuo HORII (Pfizer, Global)

Symposium 19

July 1 (Fri) 10:00 - 11:30 Room 1

Microsampling: Current Status and Foresight

Chairs: Yoshiro SAITO (National Institute of Health Sciences)
Mamoru MUTAI (LSIM Safety Institute Corporation)

Introduction

10:00 - 10:01

Mamoru MUTAI (LSIM Safety Institute Corporation)

S19-1 An overview on the application of microsampling to toxicokinetics

10:01 - 10:11

Yoshiro SAITO (Division of Medicinal Safety Science, National Institute of Health Sciences)

S19-2 Application of the microsampling method to rodent safety studies

10:11 - 10:26

Kazuaki TAKAHASHI (LSIM Safety Institute Corporation)

S19-3 Verification for practical application of microsampling in nonclinical safety studies

10:26 - 10:41

Norimichi HATTORI (Product Evaluation Group, Evaluation & Analysis Section, Research Institute for Bioscience Products & Fine Chemicals, Ajinomoto Co., Inc.)

S19-4 Introduction of a determination method for model oligonucleotide therapeutics in biological specimen - with a case study of determination in plasma obtained utilizing a microsampling method -

10:41 - 10:56

Shin-ichiro NITTA (LSI Medience Corporation)

S19-5 Case reports: Application of Microsampling Methods in GLP studies

10:56 - 11:11

Yuki YAMAMURO (Non-clinical Safety Assessment Dept., Translational Research Div., Safety Chugai Pharmaceutical Co., Ltd.)

S19-6 The use of capillary microsampling in GLP toxicology studies: experience at Janssen R&D

11:11 - 11:26

Tom VERHAEGHE (Development Bioanalysis, Janssen Research and Development)

Discussion

11:26 - 11:29

Conclusion

11:29 - 11:30

Yoshiro SAITO (National Institute of Health Sciences)

7/1 AM

Room 2

Symposium 20

July 1 (Fri) 9:00 - 11:30 Room 2

Children's toxicology: factors of dysplasia of brain function

Chairs: Makiko KUWAGATA (Division of Cellular & Molecular Toxicology, National Institute of Health Sciences)
Kentato TANEMURA (Laboratory of Animal Reproduction and Development Graduate School of Agricultural Science Tohoku University)

Introduction

9:00 - 9:02

S20-1 Introduction to the session "Factors leading to the abnormal development of high brain functions"

9:02 - 9:12

Jun KANNO (National Institute of Health Sciences)

S20-2 Does neonicotinoid have some impact against neurodevelopment of children?

9:12 - 9:42

Go ICHIKAWA (Department of Pediatrics, Symphony Hospital, Utsunomiya Craniospinal Center)

S20-3 Similarities and differences between autism spectrum disorder and schizophrenia

9:42 - 10:12

Kenji J. TSUCHIYA^{1,2} (¹Hamamatsu University School of Medicine, Research Center for Child Mental Development, ²United Graduate School of Child Development, Osaka University, Kanazawa University, Hamamatsu University School of Medicine, Chiba University and University of Fukui)

S20-4 The roles of autism susceptibility gene *AUTS2* in neurodevelopment and psychiatric disorders

10:12 - 10:42

Kei HORI (Department of Biochemistry & Cellular Biology, National Institute of Neuroscience, NCNP, Japan)

S20-5 Emotional and Cognitive Behavior in Male Mice Following a Single Oral Administration of Acephate -Neuroactive Chemical Exposure and Neurodevelopmental Disorders-

10:42 - 11:12

Hirokatsu SAITO (Division of Cellular and Molecular Toxicology, Center for Biological Safety and Research, National Institute of Health Sciences)

Discussion

11:12 - 11:28

Conclusion

11:28 - 11:30

Room 3

Educational Lecture 2

July 1 (Fri) 9:00 - 9:50 Room 3

Chair: Chiharu TOHYAMA (Emeritus Professor, The University of Tokyo)

EL2 Environmental Toxicology in Anthropocene

Chiho WATANABE (Graduate School of Tropical Medicine and Global Health, Nagasaki University)

7/1 AM

Risk assessment and risk communication regarding the administration of medicines and breastfeeding

Chairs: Kazuhiro SHIMOMURA (Vaccine Research Laboratories, Daiichi Sankyo Co., Ltd.)
Fumito MIKASHIMA (Pharmaceuticals and Medical Devices Agency)

Introduction

9:50 - 9:54

S21-1 The revision of Instructions for package inserts, and the new section "Breast-feeding Women"

9:54 - 10:17

Reiko OHARA (Pharmaceuticals and Medical Devices Agency (PMDA))

S21-2 Basic Risk Assessment Approach for Breastfeeding while using pharmaceuticals

10:17 - 10:40

Fumito MIKASHIMA (Pharmaceuticals and Medical Devices Agency)

S21-3 FDA draft guidance and nonclinical safety study issues

10:40 - 11:03

Kazuhiro SHIMOMURA (Vaccine Research Laboratories, Daiichi Sankyo Co., Ltd.)

S21-4 Clinical updates in breastfeeding and medications

11:03 - 11:26

Naoki ITO^{1,2} (¹Department of Pediatrics, Teikyo University, ²Japan Drug Information Institute in Pregnancy)

Discussion

11:26 - 11:46

Conclusion

11:46 - 11:50

Room 4

Up-to-Date of Laboratory Animal Study - Outreach & Well-being -

Chairs: Kazuto WATANABE (Non-Clinical Evaluation Expert Committee, Drug Evaluation Committee, The Japan Pharmaceutical Manufacturers Association)
Mutsumi SUZUKI (Kyowa Kirin Co., Ltd. R&D Division, Translational Research Unit, Toxicological Research Laboratories)

Introduction

9:00 - 9:05

S22-1 Aiming for appropriate animal experiments

9:05 - 9:30

Toru URANO (National Institute of Natural Sciences, Research Enhancement Strategy Office)

S22-2 Current status of compliance on Animal Testing Conducted by Pharmaceutical Companies - From the Results of Questionnaires on Animal Testing and Opinion Exchange Meetings at the Japan Pharmaceutical Manufacturers Association -

9:30 - 9:55

Naoyuki SAITO^{1,2} (¹Drug Evaluation Committee, Japan Pharmaceutical Manufacturers Association, ²Otsuka Pharmaceutical Factory, Inc.)

S22-3 Basic and applied approach of chrono-nutrition on animal experiments

9:55 - 10:20

Shigenobu SHIBATA (School of Advanced Science and Engineering, Waseda University)

S22-4 For a precise mouse phenotypic information

10:20 - 10:45

Shigeharu WAKANA (Department of Animal Experimentation, Foundation for Biomedical Research and Innovation at Kobe)

S22-5 Application of environmental enrichments in animal experiments

10:45 - 11:10

Hironari KOYAMA (KAC Co., Ltd.)

Discussion

11:10 - 11:30

Room 5

Symposium 23

July 1 (Fri) 9:00 - 11:30 Room 5

Risk management and countermeasures for the aggravation and sequelae of COVID-19

Chairs: Motohiro NISHIDA (Kyushu University, Graduate School of Pharmaceutical Sciences)

Yasunari KANDA (National Institute of Health Sciences)

S23-1 Mechanism of COVID-19 myocardial severity and its therapeutic strategy

9:00 - 9:25

Yuri KATO (Department of Physiology, Graduate School of Pharmaceutical Sciences, Kyushu University)

S23-2 Development of SARS-CoV-2 infection model using human iPSC technology

9:25 - 9:55

Yasunari KANDA (Division of Pharmacology, National Institute of Health Sciences)

S23-3 Prevention and Diagnosis of Infectious Diseases: Preparing for the Coming Pandemic

9:55 - 10:25

Takao INOUE (Division of Molecular Target and Gene Therapy Products, National Institute of Health Sciences)

S23-4 Significance of lung injury-related biomarker proteins as prognostic factors for severe COVID-19 progression

10:25 - 10:55

Noriaki ARAKAWA (Division of Medicinal Safety Science, National Institute of Health Sciences)

S23-5 COVID-19 research in digital twin era

10:55 - 11:25

Shingo IWAMI (Division of Biological Science, Graduate School of Science, Nagoya University)

Discussion

11:25 - 11:30

Room 6

Symposium 24

July 1 (Fri) 9:00 - 11:30 Room 6

Novel Aspects of Developmental Toxicity Mechanisms of Dioxins and Related Compounds

Chairs: Hideko SONE (Yokohama University of Pharmacy)

Tsuyoshi NAKANISHI (Laboratory of Hygienic Chemistry and Molecular Toxicology, Gifu Pharmaceutical University)

Introduction

9:00 - 9:05

Hideko SONE (Yokohama University of Pharmacy)

S24-1 Diverse disruptive actions of dioxins on estrogen signaling

9:05 - 9:30

Keishi ISHIDA (Laboratory of Hygienic Chemistry and Molecular Toxicology, Gifu Pharmaceutical University)

S24-2 AhR and Atopic Dermatitis

9:30 - 9:55

Tomohiro EDAMITSU (Department of Medical Biochemistry, Graduate School of Medicine, Tohoku University)

S24-3 Relation of cytoplasmic actions of AhR and dioxin toxicity

9:55 - 10:25

Wataru YOSHIOKA (Azabu University)

S24-4 Developmental toxicity of dioxin in cardiovascular system

10:25 - 10:55

Hiroki TERAOKA (Rakuno Gakuen University)

S24-5 Orchestration of growth factor signaling and environmental toxicants on craniofacial development

10:55 - 11:25

Yuji MISHINA (University of Michigan School of Dentistry)

Conclusion

11:25 - 11:30

Tsuyoshi NAKANISHI (Laboratory of Hygienic Chemistry and Molecular Toxicology, Gifu Pharmaceutical University)

Room 7

7/1 AM

Symposium 25

July 1 (Fri) 9:00 - 11:00 Room 7

International symposium : Anti-Drug Conjugates (ADCs), Exosomes - Perspectives from Researchers and Regulatory Scientists on these new Modalities of Drug Delivery**Chairs: Hideo FUKUI** (Axcelead Drug Discovery Partners, Inc.)**Kazushige MAKI** (Pharmaceuticals and Medical Devices Agency)**S25-1 Antibody Drug Conjugates - An alternative delivery system for chemotherapeutic payloads : nonclinical challenges and considerations**

9:00 - 10:00

Mary MCFARLANE (AstraZeneca R&D Clinical Pharmacology & Safety Sciences, Oncology Safety)

S25-2 Extracellular vesicle/Exosome-based Therapeutics in Toxicology

10:00 - 11:00

Yu FUJITA^{1,2} (¹Department of Translational Research for Exosomes, The Jikei University School of Medicine, ²Division of Respiratory Medicine, Department of Internal Medicine, The Jikei University School of Medicine)

Oral Session 1

July 1 (Fri) 11:00 - 11:48 Room 7

Oral Session 1**Chairs: Masafumi NAKAYAMA** (Laboratory of Immunology and Microbiology, College of Pharmaceutical Sciences, Ritsumeikan University)**Kazuya NAGANO** (Wakayama Medical University)**Skin****O-1 An activation of MAPK pathway is associated with the bidirectional regulation of sebum production by a BRAF inhibitor, vemurafenib, in hamster sebocytes in vitro**

11:00 - 11:12

Toshikazu KOIWAI (Department of Biochemistry, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan)

O-2 Identification of personal care products to exacerbate allergies

11:12 - 11:24

Akiko HONDA^{1,2} (¹Grad. Sch. of Global Environ. Studies, Kyoto Univ., ²Grad. Sch. of Eng., Kyoto Univ.)

O-3 Detection of supersulfide contained in the stratum corneum of the skin

11:24 - 11:36

Reina HASHIMOTO (Department of Pharmacokinetics and Biopharmaceutics, Institute of Biomedical Sciences, Tokushima University)

Respiratory system

O-4 Involvement of low concentrations of indoor volatile organic compounds in the development of pathophysiology of mouse models of allergic asthma and acute lung injury

11:36 - 11:48

Kengo TOMITA (Medical Environment Engineering Group, Center for Environmental Engineering, Institute of Technology, Shimizu Corporation)

Room 8

Oral Session 2

July 1 (Fri) 9:00 - 10:00 Room 8

Oral Session 2

Chairs: Kiyoshi KUSHIMA (Astellas Pharma Inc., Applied Research and Operations)
Kumiko OGAWA (National Institute of Health Sciences)

Metals

O-5 The effect of cadmium on the cellular levels of necroptosis related factors

9:00 - 9:12

Jin-Yong LEE (School of Pharmacy, Aichi Gakuin University)

Nanomaterials

O-6 Elucidation of silver nanoparticles induced cell death and expression of Rubicon in SH-SY5Y cells

9:12 - 9:24

Takamitsu MIYAYAMA (Division of Environmental and Occupational Medicine, Department of Hygiene and Public Health, School of Medicine, Tokyo Women's Medical University)

O-7 Evaluation of immunotoxicity of nanomaterials using undifferentiated and differentiated monocytic cell line THP-1

9:24 - 9:36

Kazutoshi IIJIMA (Faculty of Engineering, Yokohama National University)

Biopharmaceuticals

O-8 G(&)T Without the Headache – Making Nonclinical Safety Studies of Gene Therapy Manageable

9:36 - 9:48

Robert W EVANS (Labcorp Drug Development)

Radiation

O-9 Proliferative and apoptotic effects of coenzyme Q10 in radioiodine-131 induced acute renal toxicity

9:48 - 10:00

Nihat YUMUSAK (Department of Pathology, Faculty of Veterinary Medicine, Harran University, Sanliurfa, Turkey)

7/1 AM

Oral Session 3

Chairs: Daigo SUMI (Faculty of Pharmaceutical Sciences, Tokushima Bunri University)

Yasuhiro SHINKAI (Faculty of Medicine, University of Tsukuba)

Oxidative stress

O-10 Triclocarban induced lipid droplet accumulation and oxidative stress responses by inhibiting mitochondrial fatty acid oxidation in HepaRG cells
10:00 - 10:12

Hitoshi NAKAMURA (Takeda Pharmaceutical Company Limited)

O-11 Protective effects of human serum albumin treatment in experimental endotoxic shock
10:12 - 10:24

Aina MUKAI (Department of Pharmacokinetics and Biopharmaceutics, Institute of Biomedical Sciences, Tokushima University)

O-12 Functional elucidation of supersulfide in human hair
10:24 - 10:36

Takeru HIRAI (Department of Pharmacokinetics and Biopharmaceutics, Institute of Biomedical Sciences, Tokushima University)

O-13 Development of a novel method for albumin-based nanoparticle preparation using sulfosalicylic acid for the treatment of sepsis
10:36 - 10:48

Yukina TOTTORI (Department of Pharmacokinetics and Biopharmaceutics, Institute of Biomedical Sciences, Tokushima University)

Inflammation

O-14 Expression of GSH transporter Slc25a39 and Slc25a40 in mice with bile duct ligation or LPS treatment
10:48 - 11:00

Atsushi KAWASE (Department of Pharmacy, Faculty of Pharmacy, Kindai University)

Oral Session 4

Chairs: Yusuke OKUBO (Division of Cellular and Molecular Toxicology, Biological Safety and Research Center, National Institute of Health Sciences)

Tetsuro ARAKI (Toxicological Research Laboratories, Translational Research Unit, R&D Division, Kyowa Kirin Co., Ltd.)

Alternatives to mammalian models

O-15 A high precision and comprehensive human developmental toxicity test based on the dynamics of signal disruption in human iPS cells
11:00 - 11:12

Yusuke OKUBO (Division of Cellular and Molecular Toxicology, Biological Safety and Research Center, National Institute of Health Sciences)

O-16 Cardiac microphysiological system for detecting drug-induced contractile dysfunction
11:12 - 11:24

Daiju YAMAZAKI (Division of Pharmacology, National Institute of Health Sciences)

Animal model

O-17 Beneficial effects of vitamin E on radioiodine induced gastrointestinal damage: an experimental study
11:24 - 11:36

Nihat YUMUSAK (Department of Pathology, Faculty of Veterinary Medicine, Harran University, Sanliurfa, Turkey)

O-18 **Live-cell imaging of DNA damage responses: interpretation from organoids to whole body**

11:36 - 11:48

Kensuke OTSUKA (Biology and Environmental Chemistry Division, Sustainable System Research Laboratory,
Central Research Institute of Electric Power Industry)

O-19 **Pathological cardiovascular remodeling occurring in the cynomolgus monkey against atrioventricular block condition: characterization as an *in vivo* proarrhythmia model animal**

11:48 - 12:00

Hiroko IZUMI-NAKASEKO (Department of Pharmacology, Faculty of Medicine, Toho University)

7/1 AM

Day 2 PM (July 1 (Fri))

Room 1

Award Lecture

July 1 (Fri) 14:50 - 16:30 Room 1

The JSOT Award

Chair: Kumiko OGAWA (National Institute of Health Sciences)

AWL1 Chronic toxicity, carcinogenicity, and underlying mechanisms of organic arsenicals

14:50 - 15:30

Hideki WANIBUCHI (Department of Molecular Pathology, Osaka Metropolitan University Graduate School of Medicine)

The JSOT Young Scientist Award 1

Chair: Yaichiro KOTAKE (Grad. Sch. of Biomed. and Health Sci., Hiroshima Univ.)

AWL2 Physiological actions of fatty acid metabolites produced by drug-metabolizing enzymes on the reduction of neurotoxicity

15:30 - 15:50

Ami OGURO (Graduate School of Biomedical and Health Sciences, Hiroshima University)

The JSOT Young Scientist Award 2

Chair: Kouichi YOSHINARI (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

AWL3 Understanding mechanisms for nuclear receptor-mediated hepatocyte proliferation

15:50 - 16:10

Ryota SHIZU (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

The JSOT Young Scientist Award 3

Chair: Yasumitsu OGRA (Graduate School of Pharmaceutical Sciences, Chiba University)

AWL4 Evaluation of post-mortem changes between blood proteins and drugs

16:10 - 16:30

Yamagishi YOSHIKAZU (Center for Education and Research in Legal Medicine, Graduate School of Medicine, Chiba University)

Room 2

Symposium 26

July 1 (Fri) 14:50 - 16:50 Room 2

Application of advanced in vitro humanized model for Drug Safety research

Chairs: Tadahiro SHINOZAWA (Global Drug Safety Research and Evaluation, Takeda Pharmaceutical Company)
Norikazu SAIKI (Tokyo Medical and Dental University, Division of Advance Multidisciplinary Research)

S26-1 Reconstruction of hepatic tissue in vitro

14:50 - 15:20

Toshihiro MITAKA (Department of Tissue Development and Regeneration, Research Institute for Frontier Medicine, Sapporo Medical University School of Medicine)

S26-2 Organ-specialized vasculature bearing human liver organoid system for drug toxicity study

15:20 - 15:50

Norikazu SAIKI^{1,2} (¹Tokyo Medical and Dental University, Division of Advance Multidisciplinary Research, ²T-CiRA Joint Program)

7/1 PM

S26-3 In vitro assays for liver injury from viewpoint of a researcher in a pharmaceutical industry

15:50 - 16:20

Yutaka TONOMURA (Pharmacokinetics and Safety Assessment Dept., Discovery Research Labs., Nippon Shinyaku Co., Ltd.)

S26-4 The application of advanced liver spheroid assay to small molecule lead optimization -Chemical toxicology perspective-

16:20 - 16:50

Tomoya YUKAWA (Drug safety Research and Evaluation, Chemical Toxicology)

Room 3

Workshop 4

July 1 (Fri) 14:50 - 16:50 Room 3

Novel strategy for exposome

Chairs: Takashi UEHARA (Department of Medicinal Pharmacology, Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama University)

Yoshito KUMAGAI (Environmental Biology Laboratory, Faculty of Medicine, University of Tsukuba)

Introduction

14:50 - 14:55

Yoshito KUMAGAI (Environmental Biology Laboratory, Faculty of Medicine, University of Tsukuba)

W4-1 Exposome specializing in food additives

14:55 - 15:17

Akihiro ITO (School of Life Sciences, Tokyo University of Pharmacy and Life Sciences)

W4-2 Immune memory of food through protein modification

15:17 - 15:39

Koji UCHIDA^{1,2} (¹Graduate School of Agricultural and Life Sciences, The University of Tokyo, ²AMED-CREST)

W4-3 Discovery of small molecules that control histone modifications

15:39 - 16:01

Takayoshi SUZUKI (SANKEN, Osaka University)

W4-4 Development of Alkyne-tag Technologies for Identification of Protein Adducts

16:01 - 16:23

Kosuke DODO^{1,2} (¹RIKEN CPR, ²RIKEN CSRS)

W4-5 Potential Use of Invertebrate Models in Exposome Research

16:23 - 16:45

Ryusuke NIWA (Life Science Center for Survival Dynamics, Tsukuba Advanced Research Alliance (TARA), University of Tsukuba)

Summary

16:45 - 16:50

Takashi UEHARA (Department of Medicinal Pharmacology, Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama University)

7/1 PM

Room 4

Symposium 27

July 1 (Fri) 14:50 - 16:50 Room 4

Next Generation Research Seminar : New Intersection of Forensic Science and Toxicology

Chairs: Yuhji TAQUAHASHI (Division of Cellular and Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Yasuyuki FUJIWARA (Department of Environmental Health, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

Introduction

14:50 - 14:53

S27-1 Forensic Toxicology in Japan

14:53 - 15:38

Hirotarō IWASE (Department of Legal Medicine, Faculty of Medicine, Chiba University)

S27-2 Drug poisoning in forensic radiology

15:38 - 16:13

Maiko YOSHIDA (Chiba University Center for Education Research in Legal Medicine)

S27-3 Postmortem Brain Research on Psychiatric Disorders, Beginning with Forensic Autopsies

16:13 - 16:48

Yoichiro TAKAHASHI (Department of Legal Medicine, Faculty of Medicine, University of Tsukuba)

Conclusion

16:48 - 16:50

Room 5

Workshop 5

July 1 (Fri) 14:50 - 16:50 Room 5

Let's discuss the current status and challenges of non-clinical safety assessment in the early stages of drug development

Chairs: Kazushige MAKI (Pharmaceuticals and Medical Devices Agency)

Mutsumi SUZUKI (Kyowa Kirin Co., Ltd. R&D Division, Translational Research Unit, Toxicological Research Laboratories)

Introduction

14:50 - 14:51

W5-1 Results of questionnaire survey on non-clinical toxicity evaluation in the early phase of development

14:51 - 15:11

Jun KATAGI (Ono Pharmaceutical Co., Ltd.)

W5-2 Proposal for FIH from pharmaceutical companies based on the results of a questionnaire survey on nonclinical toxicological evaluation

15:11 - 15:31

Terutaka KODAMA (EA Pharma.Co., Ltd.)

W5-3 PMDA's Perspective on Non-clinical Safety Study Issues in Early Development

15:31 - 16:06

Fumito MIKASHIMA (Pharmaceuticals and Medical Devices Agency)

7/1 PM

Panel Discussion

16:06 - 16:49

Izuru MIYAWAKI (Preclinical Research Unit, Sumitomo Pharma Co., Ltd.)

Satoshi TSUNODA (Pharmaceuticals and Medical Devices Agency)

Conclusion

16:49 - 16:50

Room 6

Symposium 28

July 1 (Fri) 14:50 - 16:50 Room 6

Biomaterials Specialty Section Symposium: Frontiers of elemental analysis supporting the research in toxicology

Chairs: Yu-ki TANAKA (Graduate School of Pharmaceutical Sciences, Chiba University)

Miyuki IWAI-SHIMADA (Health and Environmental Risk Research Division, National Institute for Environmental Studies)

Introduction

14:50 - 14:52

S28-1 Chemical forms of anthropogenic gadolinium in river water

14:52 - 15:21

Satoki OKABAYASHI (Kwansei Gakuin University)

S28-2 Recent advances in LA-ICP-MS for environmental health science

15:21 - 15:50

Miyuki IWAI-SHIMADA (Health and Environmental Risk Research Division, National Institute for Environmental Studies)

S28-3 Elemental analysis of a single cell for the applications in toxicology

15:50 - 16:19

Yu-ki TANAKA (Graduate School of Pharmaceutical Sciences, Chiba University)

S28-4 Quantitative imaging analysis of nanoparticles and ionic forms using laser ablation single particle ICP-mass spectrometry

16:19 - 16:48

Shuji YAMASHITA (School of Science, The University of Tokyo)

Conclusion

16:48 - 16:50

Room 7

Symposium 29

July 1 (Fri) 14:50 - 16:50 Room 7

On the frontline of Wildlife Toxicity Assessment by Young Researchers

Chair: Masafumi KATAYAMA (National Institute for Environmental Studies)

Introduction

14:50 - 14:55

S29-1 Gazing at the risk of anticoagulant rodenticides (ARs) application from aquatic biota: Attempt to evaluate ARs toxicity in sea turtles

14:55 - 15:18

Yoshiya YAMAMURA^{1,2} (¹Laboratory of Toxicology, Department of Environmental Sciences, Graduate School of Veterinary Medicine, Hokkaido University, ²The Institute of Environmental Toxicology)

7/1 PM

S29-2 Establishment of wildlife culture cell with a few genes for the evaluation of toxicity

15:18 - 15:41

Masafumi KATAYAMA (National Institute for Environmental Studies)

S29-3 Construction of a method for predicting animal species differences in chemical sensitivity from human single nucleotide polymorphisms using molecular simulation

15:41 - 16:04

Kazuki TAKEDA^{1,2} (¹Laboratory of Toxicology, School of Veterinary Medicine, Kitasato University,
²Department of Computer Science, Tokyo Institute of Technology)

S29-4 An Approach to Exposure and Exposure Effects Analysis Using a High-Resolution Mass Spectrometer

16:04 - 16:27

Akifumi EGUCHI (Department of Sustainable Health Science, Center for Preventive Medical Sciences, Chiba University)

S29-5 Evolution and species differences in xenobiotic metabolizing enzyme genes in mammals and birds suggested by genome analysis

16:27 - 16:50

Yusuke KAWAI (Obihiro University of Agriculture and Veterinary Medicine)

Room 8

Symposium 30

July 1 (Fri) 14:50 - 16:50 Room 8

Research Approaches Towards Accurate Developmental Neurotoxicity Assessment

Chairs: Kazuaki NAKAMURA (National Research Institute for Child Health and Development)
Toshihiro ENDO (Phenovance LLC)

Introduction

14:50 - 14:55

Kazuaki NAKAMURA (National Research Institute for Child Health and Development)

S30-1 Automated Behavioral Analysis Approach for Future Developmental Neurotoxicity Assessment

14:55 - 15:20

Seico BENNER (Department of Psychiatry, Hamamatsu University School of Medicine)

S30-2 Developmental neurotoxicity assessment of environmental chemicals using animal model: An application to toxicity testing

15:20 - 15:45

Fumihiko MAEKAWA (Health and Environmental Risk Research Division, National Institute for Environmental Studies)

S30-3 Developmental neurotoxicity assessment of environmental chemicals using animal models: Toxicological endophenotypes

15:45 - 16:10

Masaki KAKEYAMA^{1,2} (¹Waseda University Faculty of Human Sciences, ²Research Institute of Environmental Medical Sciences, Waseda University)

S30-4 *in vitro* approach for the developmental neurotoxicity potential using neural stem cell functions

16:10 - 16:35

Tomohiro ITO (National Institute for Environmental Studies)

Discussion

16:35 - 16:50

7/1 PM

Day 3 AM (July 2 (Sat))

Room 1

Symposium 31

July 2 (Sat) 9:00 - 11:30 Room 1

**New direction of read-across approach:
From safety evaluation and regulatory use to drug repositioning**

Chairs: Kouichi YOSHINARI (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

Hiroshi HONDA (Kao Corporation, R&D Safety Science Research)

Introduction

9:00 - 9:05

S31-1 Fundamentals of Read-across and the Status of its Regulatory Use

9:05 - 9:34

Yuki SAKURATANI (Chemicals Management Center, National Institute of Technology and Evaluation)

S31-2 Next generation read-across that integrates methods of in silico and in vitro

9:34 - 10:03

Hiroshi HONDA (Kao Corporation, R&D Safety Science Research)

S31-3 Prediction of chemical toxicity by read-across using chemical structure information

10:03 - 10:32

Kouichi YOSHINARI (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

S31-4 Investigation of mathematical science issues for conducting read-across

10:32 - 11:01

Jun-ichi TAKESHITA (Research Institute of Science for Safety and Sustainability, National Institute of Advanced Industrial Science and Technology (AIST))

S31-5 Predicting pharmacological effects of chemicals based on the interactions with all human proteins

11:01 - 11:30

Yoshihiro YAMANISHI (Department of Bioscience and Bioinformatics, Faculty of Computer Science and Systems Engineering, Kyushu Institute of Technology)

Room 2

Educational Lecture 3

July 2 (Sat) 9:00 - 9:50 Room 2

Chair: Hisaharu YAMADA (LSI Medience Corporation Drug Discovery Support Business Headquarters)

EL3 Destructive innovation of vaccine R&D under COVID-19 pandemic

Ken J ISHII^{1, 2, 3} (¹Division of Vaccine Science, The Institute of Medical Science, The University of Tokyo, ²International Vaccine Design Center, The Institute of Medical Science, The University of Tokyo, ³Center for Vaccine and Adjuvant Research, National Institutes of Biomedical Innovation, Health and Nutrition)

A new approach to non-clinical safety assessment of biopharmaceuticals

Chairs: Kazushige MAKI (Pharmaceuticals and Medical Devices Agency)

Kiyoshi KINOSHITA (Japan Pharmaceutical Manufacturers Association, Drug Evaluation Committee, Non-Clinical Evaluation Expert Committee)

Introduction

9:50 - 9:52

S32-1 Current problems for toxicological assessment in biopharmaceuticals development based on actual cases

9:52 - 10:17

Masaki HONDA (Chugai Pharmaceutical Co., Ltd.)

S32-2 Status and challenges of nonclinical safety assessment of biopharmaceuticals; Two survey results with about 10-year interval

10:17 - 10:42

Kiyoshi KINOSHITA^{1,2} (¹Japan Pharmaceutical Manufacturers Association, Drug Evaluation Committee, Non-Clinical Evaluation Expert Committee, ²MSD K.K., Japan Development, Regulatory Affairs Area)

S32-3 Survey results from across industry support and inform an ICH S6 Q&A proposal

10:42 - 11:07

Rachel B GOLDSMITH (Janssen Research & Development)

S32-4 Current Status and Issues of Non-clinical Safety Evaluation of Biopharmaceuticals at PMDA

11:07 - 11:32

Kazushige MAKI (Pharmaceuticals and Medical Devices Agency)

Discussion

11:32 - 11:48

Conclusion

11:48 - 11:50

Room 3

SOT-JSOT Joint Symposium: Latest insight into metal toxicity at the molecular level

Chairs: Akihiko HIROSE (National Institute of Health Sciences)

Michael ASCHNER (Albert Einstein College of Medicine, Department of Molecular Pharmacology)

Introduction

9:00 - 9:02

S33-1 Manganese-Induced Neurotoxicity: Mechanistic Update

9:02 - 9:31

Michael ASCHNER (Albert Einstein College of Medicine, Department of Molecular Pharmacology)

S33-2 Cellular and molecular insights into the mechanisms of latent and persistent methylmercury neurotoxicity

9:31 - 10:00

Aaron B BOWMAN (School of Health Sciences, Purdue University)

S33-3 Site-specific neural hyperactivity via the activation of MAPK and PKA/CREB pathways triggers neuronal degeneration in methylmercury-intoxicated mice

10:00 - 10:29

Masatake FUJIMURA (National Institute for Minamata Disease)

S33-4 Phytochemicals repressing methylmercury toxicity

10:29 - 10:58

Yoshito KUMAGAI (Environmental Biology Laboratory, Faculty of Medicine, University of Tsukuba)

Conclusion

10:58 - 11:00

Oral Session 5

July 2 (Sat) 11:00 - 11:48 Room 3

Oral Session 5

Chairs: Tsuyoshi NAKANISHI (Laboratory of Hygienic Chemistry and Molecular Toxicology, Gifu Pharmaceutical University)

Yoshinori IKENAKA (Hokkaido University)

Nervous system

O-20 Impact of Benzo[a]pyrene exposure on Central Nervous System of Mice

11:00 - 11:12

Walaa SH. ABD EL NABY^{1,2} (¹Occupational and Environmental Health, Department of Pharmaceutical Sciences, Tokyo University of Science, ²Genetics and Genetic Engineering, Department of Animal Husbandry and Animal Wealth Development, Faculty of Veterinary Medicine, Alexandria University, Egypt)

O-21 Effect of minocycline on pathological progression in the infarct brain of the photothrombosis mouse model

11:12 - 11:24

Mari KONDO (Laboratory of Hygienic Sciences, Kobe Pharmaceutical University)

O-22 Mechanisms regulating astrocyte reactivity in the cerebral cortex exposed to fetal alcohol spectrum disorders

11:24 - 11:36

Hiroshi HASEGAWA (Laboratory of Hygienic Sciences, Kobe Pharmaceutical University)

O-23 Changes in enteric cellular environment of the parkinsonian mice induced by chronic subcutaneous administration with low-dose rotenone

11:36 - 11:48

Masato ASANUMA (Department of Medical Neurobiology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences)

Room 4

Symposium 34

July 2 (Sat) 9:00 - 11:00 Room 4

Usefulness of 3D culture model of RPTEC -aiming to predict renal pharmacokinetics and toxicity-

Chairs: Miki NAKAJIMA (Faculty of Pharmaceutical Sciences, Kanazawa University)

Ikumi TAMAI (Faculty of Pharmaceutical Sciences, Kanazawa University)

Introduction

9:00 - 9:03

S34-1 Characterization of 3D-RPTEC as improved in vitro human proximal tubular cell system

9:03 - 9:29

Naoki ISHIGURO (Nippon Boehringer Ingelheim Co., Ltd.)

S34-2 Utility of 3D-RPTEC in evaluation of renal drug metabolism

9:29 - 9:55

Miki NAKAJIMA (Faculty of Pharmaceutical Sciences, Kanazawa University)

S34-3 Uncover transporter-mediated drug-induced kidney injury

9:55 - 10:21

Hiroshi ARAKAWA (Faculty of Pharmaceutical Sciences, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University)

7/2 AM

S34-4 Development of 3D-culture model using human renal proximal tubule cells and its application to drug discovery and development

10:21 - 10:47

Etsushi TAKAHASHI (Nikkiso Co., Ltd.)

Discussion

10:47 - 10:59

Conclusion

10:59 - 11:00

Oral Session 6

July 2 (Sat) 11:00 - 11:48 Room 4

Oral Session 6

Chairs: Kei NOMIYAMA (Center for Marine Environmental Studies (CMES), Ehime University)

Shouta NAKAYAMA (Laboratory of Toxicology, Faculty of Veterinary Medicine, Hokkaido University)

Industrial chemicals

O-24 Metabolomics-based search for markers associated with lung damage caused by toxic particulate matters

11:00 - 11:12

Tomoki TAKEDA (Japan Organization of Occupational Health and Safety, Japan Bioassay Research Center)

Environmental pollutants

O-25 Effects of dioxin-induced low prolactin levels on breast milk secretion during lactation

11:12 - 11:24

Ming YUAN (Graduate School of Pharmaceutical Sciences, Kyushu University)

O-26 Susceptibility test to anticoagulant rodenticides in species endemic to the Ogasawara Islands

11:24 - 11:36

Masashi KOIDE (Laboratory of Toxicology, Faculty of Veterinary Medicine, Hokkaido University)

Agricultural chemicals

O-27 Characteristics of metabolism towards acetamiprid on musk shrew (Suncus murinus)

11:36 - 11:48

So SHINYA (Laboratory of Toxicology, Veterinary Medicine, Hokkaido University)

Room 5

Symposium 35

July 2 (Sat) 9:00 - 11:50 Room 5

Potential of small fish (zebrafish and medaka) as next-generation experimental animals-a new player in toxicology

Chairs: Izuru MIYAWAKI (Sumitomo Pharma Co., Ltd.)

Hajime KOJIMA (National Institute of Health Sciences)

Introduction

9:00 - 9:02

S35-1 Practicality of Zebrafish assay in ICH S5 regulation

9:02 - 9:27

Shin-ichi SEKIZAWA (Department of Pathophysiology and Animal Health, The University of Tokyo)

S35-2 Study of pharmacokinetic properties in zebrafish toward highly accurate safety assessment

9:27 - 9:52

Tasuku NAWAJI (Chemicals Evaluation and Research Institute, Japan (CERI))

7/2 AM

S35-3 Carcinogenesis in medaka

9:52 - 10:17

Satoshi FURUKAWA (Biological Research Laboratories, Nissan Chemical Corporation)

S35-4 The potential for toxicity assay of oligonucleotide therapeutics with zebrafish

10:17 - 10:37

Tomomi KAKUTANI (Preclinical Research Unit, Sumitomo Pharma Co., Ltd.)

S35-5 New trends and updated availability for Zebrafish studies in EU and US (including clinical trials resulting from zebrafish-based drug discovery/ screening pipelines)

10:37 - 11:02

Vincenzo DI DONATO (ZeClinics SL)

S35-6 High-Content Functional Screening for Oncocardiology Using Novel Translucent Cardiac Fluorescent Protein Transgenic Zebrafishes

11:02 - 11:27

Toshio TANAKA^{1,2} (¹Department of Systems Pharmacology, Mie University Graduate School of Medicine, Japan, ²Mie University Medical Zebrafish Research Center, Japan)**S35-7 Studies on neuroscience and disease models using zebrafish**

11:27 - 11:49

Koichi KAWAKAMI (Laboratory of Molecular and Developmental Biology, National Institute of Genetics)

Conclusion

11:49 - 11:50

Room 6

Symposium 36

July 2 (Sat) 9:00 - 10:30 Room 6

Evaluation of health impact and development of quality assessment methods of foods and food additives toward ensuring food safety**Chairs: Kazuma HIGASHISAKA** (Laboratory of Toxicology and Safety Science, Graduate School of Pharmaceutical Sciences, Osaka University)**Kazuya NAGANO** (School of Pharmaceutical Science, Wakayama Medical University)**Introduction**

9:00 - 9:04

Kazuma HIGASHISAKA (Laboratory of Toxicology and Safety Science, Graduate School of Pharmaceutical Sciences, Osaka University)

S36-1 Safety analysis of nanomaterial in food: Evaluation of the effect on cranial nerve function toward the development of safe forms of nanomaterial

9:04 - 9:24

Kazuma HIGASHISAKA^{1,2} (¹Laboratory of Toxicology and Safety Science, Graduate School of Pharmaceutical Sciences, Osaka University, ²Institute for Advanced Co-Creation Studies, Osaka University)**S36-2 Estimating exposure and risk assessment of chemicals from foods based on total diet study**

9:24 - 9:46

Yoshinari SUZUKI (National Institute of Health Sciences)

S36-3 MALDI-MS imaging for the evaluation of bioavailability of orally ingested compounds

9:46 - 10:08

Mitsuru TANAKA (Department of Bioscience and Biotechnology, Faculty of Agriculture, Kyushu University)

S36-4 Construction and evaluation of a novel strategy of developing molecularly targeted functional foods with a wide safety zones

10:08 - 10:28

Kazuya NAGANO^{1,2} (¹School of Pharmaceutical Science, Wakayama Medical University, ²Graduate School of Pharmaceutical Science, Osaka University)

7/2 AM

Conclusion

10:28 - 10:30

Kazuya NAGANO (School of Pharmaceutical Science, Wakayama Medical University)

Oral Session 7

July 2 (Sat) 10:30 - 11:30 Room 6

Oral Session 7

Chairs: Hiroki TERAOKA (Rakuno Gakuen University)

Seigo SANOH (¹School of Pharmaceutical Sciences, Wakayama Medical University, ²Graduate School of Biomedical and Health Sciences, Hiroshima University)

Epidemiology

O-28 Association between environmental chemical substances and sex hormones in adult males

10:30 - 10:42

Takumi KAGAWA^{1,2} (¹Department of Occupational and Environmental Health, Nagoya University Graduate School of Medicine, Japan, ²Convolution of Informatics and Biomedical Sciences On Glocal Alliances, CIBoG, WISE Program, Nagoya University)

O-29 Withdrawal

Organoid

O-30 Electrical activity imaging with high-spatio-temporal resolution in brain slices, brain organoids, and cultured neural networks

10:42 - 10:54

Ikuro SUZUKI (Department of Electronics, Tohoku Institute of Technology)

O-31 Imprinted DMRs are maintained in colon-derived organoids

10:54 - 11:06

Mie NARUSE (Central Animal Division, National Cancer Center Research Institute)

AOP (adverse outcome pathway)

O-32 Development of Adverse Outcome Pathway related to treatment-resistant gastric cancer

11:06 - 11:18

Shihori TANABE (Division of Risk Assessment, Center for Biological Safety and Research, National Institute of Health Sciences)

Drug-metabolizing enzyme

O-33 Functional analysis of mammalian UDP-glucuronosyltransferase family 1A isoforms (UGT1A1 and 1A6) using budding yeast expression system

11:18 - 11:30

Shinichi IKUSHIRO (Faculty of Engineering, Toyama Prefectural University)

7/2 AM

Male reproductive toxicity up to date

Chairs: Satoshi YOKOTA (Division of Cellular & Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Nobuhiko MIURA (Yokohama University of Pharmacy)

Introduction

9:00 - 9:05

Nobuhiko MIURA (Yokohama University of Pharmacy)

S37-1 Testicular dysfunction caused by circadian rhythm disturbance

9:05 - 9:20

Nobuhiko MIURA (Yokohama University of Pharmacy)

S37-2 Effects of stress in early life stages on the male reproductive system and next generation

9:20 - 9:40

Hidenobu MIYASO (Department of Anatomy, School of Medicine, International University of Health and Welfare)

S37-3 Effects of Exposure to Heat-Not-Burn Tobacco on Male Reproductive Function in Mice

9:40 - 10:00

Seiichi YOSHIDA (Department of Health and Sciences, Oita University of Nursing and Health Sciences)

S37-4 In vitro spermatogenesis for toxicity testing

10:00 - 10:20

Takehiko OGAWA (Yokohama City University)

S37-5 Mammalian sperm motility

10:20 - 10:40

Masakatsu FUJINOKI (Research Lab. of Laboratory Animals, Research Center for Laboratory Animals, Comprehensive Research Facilities for Advanced Medical Science, School of Medicine, Dokkyo Medical University)

S37-6 Development of a novel staining technique for evaluating sperm quality

10:40 - 10:55

Satoshi YOKOTA (Division of Cellular & Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Summary

10:55 - 11:00

Satoshi YOKOTA (Division of Cellular & Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Oral Session 8

Chairs: Kyohei NISHIMURA (¹Shionogi Co., Ltd., ²KT2 Task Force, Non-clinical Evaluation Expert Committee, Japan Pharmaceuticals Manufacturers Association)

Fumiyo SAITO (Department of Toxicology, Division of Veterinary Medicine, Faculty of Veterinary Medicine, Okayama University of Science)

General toxicology

O-34 Effects in iPSC-derived cardiomyocyte based pharmacological response using highly oxygen-permeable plates

11:00 - 11:12

Kentaro ISHIDA (Myoridge Co., Ltd.)

Reproductive and developmental toxicology

O-35 Bromelain prevented nickel-induced testicular toxicity via suppression of sperm DNA fragmentation and sperm quality alterations in rats
11:12 - 11:24

Cigdem CEBI SEN (Harran University, Department of Reproduction and Artificial Insemination)

O-36 Feasibility and reliability of a downsized comparative thyroid assay for evaluating thyroid hormone disrupting activity in maternal rats and their offspring: reproducibility study with sodium phenobarbital
11:24 - 11:36

Hidenori SUTO (Sumitomo Chemical Company, Ltd.)

O-37 Prenatal social defeat stress exposure induces developmental disorder-like behavioral abnormalities
11:36 - 11:48

Munekazu KOMADA (Department of Life Science, Faculty of Science and Engineering, Kindai University)

Room 8

Symposium 38

July 2 (Sat) 9:00 - 11:00 Room 8

Recent drug application and toxicity evaluation in the eyes

Chairs: Akinobu OKADA (Applied Research & Operations, Astellas Pharma Inc.)

Hideshi TSUSAKI (Shin Nippon Biomedical Labs (SNBL), Ltd)

S38-1 Comparative ophthalmology in laboratory animals in Drug toxicity evaluation
9:00 - 9:24

Hiroki TSUJITA (Veterinary Ophthalmology Specialized Clinic)

S38-2 Pathophysiological analysis and research for drug discovery using experimental retinal disease models
9:24 - 9:48

Masamitsu SHIMAZAWA (Molecular Pharmacology, Department of Biofunctional Evaluation, Gifu Pharmaceutical University)

S38-3 Employment of intravitreal and subretinal administration techniques for new modality drugs, and ocular toxicity evaluation
9:48 - 10:12

Tomoaki ARAKI (Shin Nippon Biomedical Laboratories Ltd. Drug Safety Research Laboratories)

S38-4 Points to consider for ocular toxicity evaluation in nonclinical study
10:12 - 10:36

Takeshi SATO (Astellas Pharma Inc.)

S38-5 A case study of ocular toxicity caused by impurities during drug development
10:36 - 11:00

Kazuhiro HOSOI (Toxicology and Pharmacokinetics Group, Pharmaceutics & Pharmacology Department, Product Development Division, Santen Pharmaceutical Co., Ltd.)

Oral Session 9

July 2 (Sat) 11:00 - 11:48 Room 8

Oral Session 9

Chairs: Akira KUBOTA (Department of Veterinary Medicine, Obihiro University of Agriculture and Veterinary Medicine)

Hazuki MIZUKAWA (Ehime University)

Cellular response

O-38 Export of excess reactive sulfur species through cystine-dependent antiporters
11:00 - 11:12

Hanako AOKI (Degree Programs in Medical Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba)

7/2 AM

O-39 Development of signal pathway analysis method utilizing intracellular localization information of protein

11:12 - 11:24

Nobuhiko MAIYA (NIKON CORPORATION)

Epigenetics

O-40 Evaluation of toxicity by monitoring cfDNA

11:24 - 11:36

Ryuichi ONO (Division of Cellular and Molecular Toxicology, Center for Biological Safety and Research (CBSR), National Institute of Health Sciences (NIHS))

Biomarkers

O-41 Effect of light-dark cycle on clinical chemistry values in male Rats Fed a high fructose diet

11:36 - 11:48

Yusuke SUZUKI^{1,2} (¹Toxicology Research Laboratories Central Pharmaceutical Research Institute Japan Tobacco Inc., ²University of Miyazaki Interdisciplinary Graduate School of Agriculture and Engineering)

Day 3 PM (July 2 (Sat))

Room 1

Symposium 39

July 2 (Sat) 14:00 - 16:30 Room 1

Immunotoxicity of chemical substances: mechanism elucidation and its prevention

Chairs: Yasuo YOSHIOKA (Institute for Open and Transdisciplinary Research Initiatives, Osaka University)
Masafumi NAKAYAMA (Laboratory of Immunology and Microbiology, College of Pharmaceutical Sciences, Ritsumeikan University)

Introduction

14:00 - 14:05

S39-1 Macrophage Recognition of Carbon Nanotubes

14:05 - 14:33

Masafumi NAKAYAMA^{1,2} (¹Laboratory of Immunology and Microbiology, College of Pharmaceutical Sciences, Ritsumeikan University, ²CREST, JST)

S39-2 Anti-inflammatory and immune functions of the xenobiotic responsive nuclear receptor PXR

14:33 - 15:01

Ryota SHIZU (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

S39-3 Perturbation of IL-17A response by environmental chemicals

15:01 - 15:29

Ryuta MUROMOTO (Faculty of Pharmaceutical Sciences, Hokkaido University)

S39-4 Influence of low-dose chemical exposure on the development of allergic diseases

15:29 - 15:57

Tomoki FUKUYAMA (Laboratory of Veterinary Pharmacology, School of Veterinary Medicine, Azabu University)

S39-5 Immunological approaches to the pathogenetic control of inflammatory bowel disease

15:57 - 16:25

Atsuhito KUBOTA^{1,2} (¹School of Pharmaceutical Sciences, Health Sciences University of Hokkaido, ²Department of Pharmacy, Hokkaido University Hospital)

Conclusion

16:25 - 16:30

Room 2

Symposium 40

July 2 (Sat) 14:00 - 16:00 Room 2

Toward further progress of 3Rs in animal experiments

Chairs: Hiroaki TODO (Faculty of Pharmacy and Pharmaceutical Sciences, Josai University)
Kousei ITO (Graduate School of Pharmaceutical Sciences, Chiba University)

Introduction

14:00 - 14:05

S40-1 International trends for 3Rs of animal experiments

14:05 - 14:29

Hajime KOJIMA (Japanese Center for the Validation of Alternative Methods, National Institute of Health Sciences)

7/2 PM

S40-2 Activities The Japanese Society for Alternatives to Animal Experiments has done and its issues

14:29 - 14:53

Masaharu AKITA (Faculty of Family and Consumer Science, Department of Nutrition and Dietetics, Kamakura Women's University)

S40-3 Development of a computational toxicology system that realizes toxicity prediction based on the mechanism of toxicity

14:53 - 15:17

Hiroshi YAMADA (Toxicogenomics Informatics Project, National Institutes of Biomedical Innovation, Health and Nutrition)

S40-4 Approaches and challenges of the 3Rs principle in assessing reproductive toxicity to higher predators (birds)

15:17 - 15:41

Takaharu KAWASHIMA (National Institute for Environmental Studies)

S40-5 Future action plan of the Japanese Society for Alternatives to Animal Experiments

15:41 - 16:00

Hiroaki TODO (Faculty of Pharmacy and Pharmaceutical Sciences, Josai University)

Room 3

Symposium 41

July 2 (Sat) 14:00 - 16:30 Room 3

AI-Driven Biology and Toxicology

Chairs: Masatoshi HAGIWARA (Department of Anatomy and Developmental Biology, Graduate School of Medicine, Kyoto University)

Jun KANNO (National Institute of Health Sciences)

Introduction

14:00 - 14:02

S41-1 AI-based omics data analyses and their applications to systems toxicology and drug discovery

14:02 - 14:32

Takeshi HASE^{1, 2, 3, 4} (¹The Systems Biology Institute, ²SBX BioSciences, Inc, ³Tokyo Medical and Dental University, Institute of Education, ⁴Keio University, Faculty of Pharmacy)

S41-2 Pre-emptive precision medicine with AI and genome information

14:32 - 15:02

Masatoshi HAGIWARA (Department of Anatomy and Developmental Biology, Graduate School of Medicine, Kyoto University)

S41-3 Data-driven drug target discovery using medical information and omics data - Challenge to idiopathic pulmonary fibrosis-

15:02 - 15:32

Yayoi NATSUME-KITATANI (National Institutes of Biomedical Innovation, Health and Nutrition)

S41-4 Genomic toxicology at single cell resolution

15:32 - 16:02

Hiroyuki ABURATANI (GenomeScience & Medicine Lab., RCAST, The University of Tokyo)

S41-5 The prospects of the Toxicology AI from the view of Percellome Project

16:02 - 16:20

Jun KANNO (National Institute of Health Sciences, Center for Biological Safety and Research, Division of Cellular and Molecular Toxicology)

Discussion

16:20 - 16:30

7/2 PM

Room 4

Educational Lecture 4

July 2 (Sat) 14:00 - 14:50 Room 4

Chair: Keiichiro SATO (Pharmacokinetics and Safety Assessment Dept., Nippon Shinyaku Co., Ltd.)

EL4 Global Assessment of the Impacts of Pharmaceutical Pollution

Alistair BOXALL (University of York)

Symposium 42

July 2 (Sat) 14:50 - 16:30 Room 4

Progress and Future Prospects of Research on Environmental Risk Assessment of Human Pharmaceuticals

Chairs: Akihiko HIROSE (National Institute of Health Sciences)

Hiroshi YAMAMOTO (Health and Environmental Risk Division, National Institute for Environmental Studies)

S42-1 Introduction

14:50 - 15:00

Akihiko HIROSE (National Institute of Health Sciences)

S42-2 Development of Environmental Monitoring and Simulation Methods for Human Pharmaceuticals in Japanese River Water

15:00 - 15:25

Norihiro KOBAYASHI (National Institute of Health Sciences)

S42-3 Ecotoxicity tests for human pharmaceuticals based on efficient testing strategy

15:25 - 15:50

Hiroshi YAMAMOTO (Health and Environmental Risk Division, National Institute for Environmental Studies)

S42-4 Development of ecotoxicity database and *in silico* approach considering uncertainty of the prediction for supporting environmental risk assessment of human pharmaceuticals

15:50 - 16:15

Takashi YAMADA (Division of Risk Assessment, Center for Biological Safety Research, National Institute of Health Sciences)

Room 5

Symposium 43

July 2 (Sat) 14:00 - 16:30 Room 5

Maternal hypothyroidism and developments of intelligence in children

Chairs: Makiko KUWAGATA (Division of Cellular & Molecular Toxicology, National Institute of Health Sciences)

Kentato TANEMURA (Laboratory of Animal Reproduction and Development Graduate School of Agricultural Science Tohoku University)

Introduction

14:00 - 14:02

S43-1 Perinatal hypothyroidism and developments of intelligence in children

14:02 - 14:08

Makiko KUWAGATA (Division of Cellular and Molecular Toxicology, CBSR, National Institute of Health and Science)

S43-2 The role of thyroid hormone in the developing central nervous system

14:08 - 14:43

Noriyuki KOIBUCHI (Department of Integrative Physiology, Gunma University Graduate School of Medicine)

7/2 PM

S43-3 Development of in vitro developmental neurotoxicity assessment

14:43 - 15:18

Yasunari KANDA (Division of Pharmacology, National Institute of Health Sciences)

S43-4 Comparative Thyroid Assay: Current situation of a short-term *in vivo* assay for thyroid hormone disrupting activity in maternal rats and their offspring as prescreen for potential developmental neurotoxicity

15:18 - 15:53

Tomoya YAMADA (Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd.)

S43-5 Environmental factors that affect thyroid functions and future generations health: Epidemiological perspectives

15:53 - 16:28

Shoji F. NAKAYAMA (Health and Environmental Risk Division, National Institute for Environmental Studies)

Conclusion

16:28 - 16:30

Room 6

Symposium 44

July 2 (Sat) 14:00 - 16:30 Room 6

Clinical adverse events/side effects that are difficult to detect in general toxicity studies -new approaches from nonclinical research Part II (Specifics)

Chairs: Izuru MIYAWAKI (Sumitomo Pharma Co., Ltd.)

Tamio FUKUSHIMA (Shionogi Co & Ltd.)

Introduction

14:00 - 14:02

Izuru MIYAWAKI (Sumitomo Pharma Co., Ltd.)

S44-1 More sensitive detection of retinal dysfunction using electroretinogram measurement (ERG) in nonclinical study

14:02 - 14:27

Naohisa UMEYA (Preclinical Research Unit, Sumitomo Pharma Co., Ltd.)

S44-2 An attempt to detect drug-induced psychiatric adverse events by evaluation of social behavior of pair-housed dogs living in EURO Guide-compliant cages

14:27 - 14:52

Miho MUKAI (SHIONOGI & CO., LTD.)

S44-3 Immunogenicity of antibody therapeutics

14:52 - 15:17

Masayuki MISHIMA (Translational Research Division, Chugai Pharmaceutical)

S44-4 Translatability from nonclinical toxicology study data to clinical side effects in case of oligonucleotide therapeutics

15:17 - 15:42

Keiichiro SATO (Pharmacokinetics and Safety Assessment Dept., Nippon Shinyaku Co., Ltd.)

S44-5 Consideration of suicide attempts from behavioral pharmacology: relevance to psychotropic drugs

15:42 - 16:07

Yukihiro NODA^{1,2} (¹Division of Clinical Sciences and Neuropsychopharmacology, Faculty of Pharmacy, Meijo University, ²Clinical OMICs and Translation Research Center, Meijo University)

S44-6 Mechanisms and prediction of severe cutaneous adverse drug reactions

16:07 - 16:29

Yoshiro SAITO (Division of Medicinal Safety Science, National Institute of Health Sciences)

Conclusion

16:29 - 16:30

7/2 PM

Active career of Toxicologists**-What value does a PhD bring to the toxicologist?-****Chair:** Yukinori AMANO (JSOT Science and Publicity Committee)**W6-1 Introduction of the survey**

14:00 - 14:13

Yukinori AMANO (JSOT Science and Publicity Committee)

W6-2 Round-table discussion

14:13 - 15:00

Panelists

Kazuhiko MORI (Daiichi Sankyo RD Novare CO., LTD.)

Hideshi TSUSAKI (Shin Nippon Biomedical Laboratories)

Kouichi YOSHINARI (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences,
University of Shizuoka)Makoto SHIBUTANI (Tokyo University of Agriculture and Technology, Institute of Agriculture,
Cooperative Division of Veterinary Science)

Moderator

Yukinori AMANO (JSOT Science and Publicity Committee)

ICH E14/S7B Q&A Update and Prospects**Chairs:** Takashi YOSHINAGA (Advanced Biosignal Safety Assessment, Eisai Co., Ltd.)Katsuyoshi CHIBA (Medicinal Safety-Precision Medicine, Daiichi Sankyo Pharma Development, Daiichi
Sankyo, Inc.)**Introduction**

15:00 - 15:05

Takashi YOSHINAGA (Advanced Biosignal Safety Assessment, Eisai Co., Ltd.)

S45-1 ICH E14/S7B Q&A: Best practice considerations for the in vitro assay

15:05 - 15:20

Takashi YOSHINAGA (Advanced Biosignal Safety Assessment, Eisai Co., Ltd.)

S45-2 In vivo QT assay and integrated risk assessment for ICH E14/S7B Q&A

15:20 - 15:35

Katsuyoshi CHIBA (Medicinal Safety-Precision Medicine, Daiichi Sankyo Pharma Development, Daiichi
Sankyo, Inc.)**S45-3 Reviewer's (PMDA) considerations for *in vitro* and *in vivo* testing/evaluation for ICH-S7B E14 S7B Q&A**

15:35 - 16:00

Satoshi TSUNODA (Pharmaceuticals and Medical Devices Agency)

Panel Discussion

16:00 - 16:30

Non-clinical Safety study Issues in Pediatric Drug Development

Chairs: Yuhji TAQUAHASHI (Division of Cellular and Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Hiroshi MINESHIMA (Department of Drug Safety Research, Otsuka Pharmaceutical Co., Ltd.)

Introduction

14:00 - 14:04

W7-1 Considerations on nonclinical safety studies for paediatric development: A Regulatory Perspective

14:04 - 14:27

Jihei NISHIMURA (Pharmaceutical and Medical Devices Agency)

W7-2 Case studies showing that toxicity studies in juvenile animals are not warranted: Demonstration using a newly generated decision tree

14:27 - 14:50

Hiroshi MINESHIMA^{1,2} (¹Department of Drug Safety Research, Otsuka Pharmaceutical Co., Ltd., ²Non-Clinical Evaluation Expert Committee, Drug Evaluation Committee, Japan Pharmaceutical Manufacturers' Association of Japan)

W7-3 Case studies requiring juvenile animal study and minimal study design considerations

14:50 - 15:13

Kiyoshi MATSUMOTO^{1,2} (¹Non-Clinical Evaluation Expert Committee, Drug Evaluation Committee, The Japan Pharmaceutical Manufacturers' Association of Japan, ²Strategy and Operations, Preclinical and Translational Sciences, Research, Takeda Pharmaceutical Company Limited)

W7-4 Pharmacokinetics at the developmental stage of children and juveniles

15:13 - 15:53

Motoharu KAKIKI (Global Drug Metabolism and Pharmacokinetics, Eisai Co., Ltd.)

W7-5 For S11; What issues are to be considered from now on?

15:53 - 16:00

Yuhji TAQUAHASHI (Division of Cellular and Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Poster Session

P-●E: Candidates for the Excellent Presentation Award

P-●S: Candidates for the Student Poster Award

Day 1 PM (June 30 (Thu) 17:30 - 18:30) Poster&Exhibition Room

Pharmaceutical drugs (chemicals)

P-1E Numerization of pathological images by representation learning oriented to support non-clinical studies

Tadahaya MIZUNO (Laboratory of Molecular Pharmacokinetics Graduate School of Pharmaceutical Sciences
The University of Tokyo)

Biopharmaceuticals

P-2E Withdrawal

P-3E Using in vivo two-photon microscopy to validate the concept that anti-CD137 antibody activated by extracellular ATP reduces systemic immune activation

Chisato KANEKO (Translational Research Division, Chugai Pharmaceutical Co., Ltd.)

Agricultural chemicals

P-4E Adverse outcome pathway (AOP)-based approach for assessing the combined neurotoxic effects of multiple pesticides

Tetsushi HIRANO (Faculty of Pharmaceutical Sciences, University of Toyama)

Metals

P-5S Cadmium inhibits HTR-8/SVneo trophoblast cell migration

Shoko OGUSHI (Department of Life Science, Faculty of Science and Engineering, Setsunan University)

P-6S Disruption of selenium metabolism by methylmercury and repair effects of super sulfides

Runa KUDO (Division of Molecular-biology and Metabolism, Department of Pharmaceutical Sciences, Tohoku University)

P-7S Withdrawal

P-8E The molecular mechanism of PPAR δ -regulated cadmium renal toxicity

Chikage MORI (Laboratory of Pharmaceutical Health Sciences, School of Pharmacy, Aichi Gakuin University)

P-9S Involvement of reactive oxygen species in the toxicity of methylmercury in cultured normal rat cerebellar astrocytes and effects of antioxidants

Shoto SASAKI (Department of Physiology, Graduate School of Pharmacy, Meijo University)

P-10E Molecular mechanism for arsenite-mediated dysfunction of blood-coagulation systems in human vascular endothelial cells and smooth muscle cells

Tsuyoshi NAKANO (Department of Environmental Health, Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-11S Induction of metallothionein expression in vascular and perivascular adipose tissue of mice treated with a single administration of arsenite
Ayumu ISEKI (Department of Environmental Health, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

P-12E Molecular mechanism of arsenic-induced hypertension: Inhibition of the vasoprotective axes of the renin-angiotensin system by arsenite
Md. Shiblur RAHAMAN^{1,2} (¹Department of Environmental and Preventive Medicine, Jichi Medical University, ²Department of Environmental Science and Disaster Management, Noakhali Science and Technology University)

■ Foods, food additives, and food contaminants

P-13S Investigation for chemicals to form glycidol hemoglobin-adduct and influential factors on hemoglobin-adducts formation
Moeka TASHIRO (School of Food and Nutritional Sciences, University of Shizuoka)

P-14S Pharmacokinetic study and 28-day repeated oral toxicity study of Enniatin B in mice
Ryota OJIRO^{1,2} (¹Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology, ²Cooperative Division of Veterinary Sciences, Graduate School of Agriculture, Tokyo University of Agriculture and Technology)

■ Environmental pollutants

P-15S Mechanism of lead-induced increase in susceptibility to ferroptosis by disturbing iron and selenium metabolism
Satoru SHIINA (Laboratory of Molecular Biology and Metabolism, Department of Pharmaceutical Sciences, Tohoku University)

P-16S Cytotoxicity evaluation considering the deterioration state of microplastics in the environment
Yudai IKUNO (Grad. Sch. Pharm. Sci., Osaka Univ.)

P-17E Characterization of clotting factor IX splicing variant 2 by cultured cell method and AlphaFold2
Kanami WATANABE (Division of Toxicology, Department of Veterinary Medicine, Kitasato University)

P-18S PI3K suppression via modification of methyl vinyl ketone, a type of reactive carbonyl species
Atsushi MORIMOTO (Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Department of Medicinal Pharmacology, Okayama University)

P-19E Novel applications of used tea leaves that contribute to reduction of environmental toxicity
Takehiro NAKAMURA (Faculty of Pharmacy, Kindai University)

P-20S Recovery from methylmercury-induced sensory impairment: The possibility of sensory neurogenesis in the dorsal root ganglion
Marika ABE (Shibuya Senior High School)

P-21E Effects of particulate matter exposure on intracellular entry of SARS-CoV-2
Raga ISHIKAWA (Graduate School of Engineering, Kyoto University)

- P-22E Residues of neonicotinoids and fipronil in paddy fields and duck eggs: Do ducks transform and accumulate these substances to egg products?**
Kraisiri KHIDKHAN (Department of Pharmacology, Faculty of Veterinary Medicine, Kasetsart University)

■ Endocrine disruptors

- P-23S Developmental effects of single and binary exposure to estrogenic endocrine disrupting chemicals on zebrafish**
Rehab Youssef AHMED^{1,2} (¹Department of Veterinary Medicine, Obihiro University of Agriculture and Veterinary Medicine, ²Department of Poultry Diseases, Faculty of Veterinary Medicine, Aswan University)

■ Nanomaterials

- P-24S Suppression of placental trophoblast syncytialization by silver nanoparticles through induction of reactive oxygen species**
Yuji SAKAHASHI (Grad. Sch. Pharm. Sci., Osaka Univ.)
- P-25E Two-year toxicity study of multi-walled carbon nanotubes (MWCNT) in F344 rats by an intermittent intratracheal administration**
Ai MAENO (Tokyo Metropolitan Institute of Public Health)

■ Nervous system

- P-26S The role of IL-1 β in Acrylamide-induced Neurotoxicity in mice**
Alzahraa A. M FERGANY^{1,2} (¹Occupational and Environmental Health, Department of Pharmaceutical Science, Tokyo University of Science, ²Genetics and Genetic Engineering in Department of Animal Husbandry and Animal Wealth Development, Faculty of Veterinary Medicine, Alexandria University, Egypt)
- P-27S Ameliorative effect of Ginkgo biloba extract-based formula (GBE) and alpha-glycosyl isoquercitrin (AGIQ) on LPS-induced depression model in rats**
Wen ZENG (Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology)
- P-28S Search for Epigenetically-modified Genes in the Hippocampus Linking to the Enhancement of Neural Functions by Continuous Exposure to Curcumin from Fetal Stages in Rats**
Qian TANG^{1,2} (¹Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology, ²Cooperative Division of Veterinary Sciences, Graduate School of Agriculture, Tokyo University of Agriculture and Technology)
- P-29S The effect of the use of Cannabidiol during pregnancy on fetal neurogenesis**
Miyuki YAGI (Department of Pharmacokinetics, School of Pharmacy and Pharmaceutical Sciences, Hoshi University)
- P-30S Validation of prediction method of addiction-inducing drug based on electrical activity of cultured human iPS cell-derived dopamine neurons**
Yuto ISHIBASHI (Graduate School of Engineering, Tohoku Institute of Technology)

■ Liver

- P-31S The usefulness of human cytochrome P450 inhibition data for evaluating drug-induced liver injury**
Misaki IWATA (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

- P-32E Elucidation of SARS-CoV-2-induced liver injury using liver-on-a-chips**
Sayaka DEGUCHI (Center for iPS Cell Research and Application (CiRA), Kyoto University)
- P-33S Expression analysis of mitophagy indicator AMBRA1 in a rat model of fatty liver**
Emika HARA (Laboratory of Veterinary Pathology, Faculty of Agriculture, Tokyo University of Agriculture and Technology)
- P-34E Understanding the drug-induced hepatotoxicity in rats —Involvement of the CYP1A1 inhibition-mediated activation of the aryl hydrocarbon receptor (AHR)—**
Tomomi YODA^{1,2} (¹Preclinical Research Unit, Sumitomo Pharma Co., Ltd., ²Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)
- P-35E Formation mechanism of acetamide-induced large micronuclei in rat hepatocytes**
Norifumi TAKIMOTO^{1,2} (¹Division of Pathology, National Institute of Health Sciences, ²Laboratory of Veterinary Medicine, Tokyo University of Agriculture and Technology)
- P-36S Evaluating the Efficacy and Safety of Novel Antifibrotic Agents Using a Nonalcoholic Steatohepatitis (NASH) Organoid Model**
Kiwamu TANABE (Department of Veterinary, Faculty of Agriculture, Tokyo University of Agriculture and Technology)
- P-37S Associations of influences on autophagy activity with liver steatosis and hepatocellular hypertrophy of chemical substances**
Yuma HAYAKAWA (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)
- P-38S A mechanism for the nuclear receptor PXR-mediated suppression of liver cancer progression**
Takumi SATO (Laboratory of Molecular Toxicology, Graduate School of Integrated Pharmaceutical and Nutritional Sciences, University of Shizuoka)
- P-39S Quantitative analysis of mCyp1a2 expression during mouse liver development and identification of the time of formation of Zonation structure**
Mako ICHIKAWA (Department of Pharmacokinetics, School of Pharmacy and Pharmaceutical Sciences, Hoshi University)

■ Kidney

- P-40S In vitro evaluation of drug-induced kidney injury considering drug transporters**
Daichi HIGUCHI (Faculty of Pharmaceutical Sciences, Institute of Medical Pharmaceutical and Health Sciences, Kanazawa University)
- P-41S Pathophysiological analysis of the kidneys of obese type 2 diabetic model SDT fatty rats fed high-sucrose/high-fat diet and comparison between males and females**
Kana WATANABE (Dept. Nutri. Sci. Food Safety, Fac. Applied Bioscience, Graduate School of Tokyo Univ. of Agricul.)
- P-42S Sex differences in expression of renal tubular membrane proteins in *SRY* transgenic mice**
Saho SUGIMOTO (Department of Bio-informational Pharmacology, University of Shizuoka)

■ Cardio vascular system

P-43S Proarrhythmia risk assessment of CiPA compounds using electro-mechanical window in human iPSC cell-derived cardiomyocytes

Shota YANAGIDA^{1,2} (¹Division of Pharmacology, National Institute of Health Sciences, ²Division of Pharmaceutical Sciences, Graduated School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University)

P-44S Analysis of β -adrenergic receptor signaling in contractile function of human iPSC cell-derived cardiomyocytes

Wataru KUNII (Department of Bio-informational Pharmacology, University of Shizuoka)

P-45S Pretreatment of phosphodiesterase type 5 inhibitor attenuates combretastatin A4 disodium phosphate derived myocardial damage in rats

Yoshiyasu NAGASHIMA (Department of Veterinary Pathophysiology and Animal Health, Faculty of Agriculture, University of Tokyo)

P-46S Maturation of human iPSC derived cardiomyocyte by continuous electrical pacing stimulation

Rin WATANABE (Department of Bio-informational Pharmacology, University of Shizuoka)

P-47S The effect of estrogens on hERG screening

Mana SUGIMOTO (Department of Bio-informational Pharmacology, University of Shizuoka)

■ Other organs or system

P-48E Detailed investigation of bone marrow toxicity induced by anticancer drugs in various animals ②

Yoko NISHINO (Global Drug Safety, Eisai Co., Ltd.)

P-49E Exploration of a novel pathological factor in peritoneal deterioration induced by long-term peritoneal dialysis

Taiki MIHARA (Department of Veterinary Pharmacology, Graduate School of Agricultural and Life Sciences, The University of Tokyo)

■ Reproductive and developmental toxicology

P-50S Paternal exposure to methylphenidate induces ADHD-like behavioral phenotypes and altered gene expressions in mouse offspring

Ryota NAKANO (Division of Toxicology, Department of Pharmacology, Toxicology and Therapeutics, Showa University School of Pharmacy)

P-51E Study on Teratogenicity of Compound X: Inhibition of the Sonic Hedgehog Pathway Induces the Teratogenicity

Riki KAWAMOTO (Safety Research Laboratories, Ono Pharmaceutical Co., Ltd.)

P-52E Exposure to acephate during early life stages alters sexual maturation and reproductive systems in male and female mice

Takahiro SASAKI (Laboratory of Animal Reproduction and Development, Graduate School of Agricultural Science, Tohoku University)

P-53S Effects of chemical activation of the nuclear receptor CAR on the development of infant mice

Sarii TASHIRO (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

- P-54S Prenatal exposure to Poly(I:C) induces behavioral abnormalities due to abnormal brain morphogenesis**
Niina KIRIYAMA (Kindai University Graduate School of Science and Engineering Faculty of Science)
- P-55E Pediatric drug influences on social behavior in juvenile rats**
Atsunori HATTORI (Laboratory for Drug Discovery and Development, Shionogi & CO., LTD.)
- P-56S Effects of environmental stress on lymphoid cells derived from human iPS cells**
Tomomi SHIMAZU (Graduate School of Pharmaceutical Sciences, Yokohama University of Pharmacy)
- P-57S Validation of brain neuronal differentiation tracer mice for improvement developmental neurotoxicity evaluation**
Kanoko TATSUMI (Gifu Pharmaceutical University)
- P-58S Imaging analysis of the offspring brain in a model of maternal hypothyroidism**
Kazuma MORI (Gifu Pharmaceutical University)

Genetic toxicology

- P-59E Examination of automated micronucleus observation using AI-based image analysis**
Takumi NUKAGA (Shiseido Co., Ltd Brand Value R&D Institute)

Carcinogenicity

- P-60E The Establishment of the normal dog bladder organoid culture model evaluated the carcinogenic toxicity of chemical substance**
Haru YAMAMOTO^{1,2} (¹Laboratory of Veterinary Pharmacology, Tokyo University of Agriculture and Technology, ²Co., Ltd AIRDEC mini)
- P-61S Lobe-specific appearance of SOX9-positive hepatocytes in the liver of rats given a hepatocarcinogen, furan**
Meili SOMA (Graduate School of Animal Health Technology, Yamazaki)

Behavioral toxicology

- P-62S The effect of TFLX in developmental period on the neurobehavior and gut microbiota in adult mice**
Ayano HASEGAWA (Laboratory of Animal Reproduction and Development, Graduate School of Agricultural Science, Tohoku University)

Immunotoxicology

- P-63E Determination of key residues in MRGPRX2 to enhance pseudo-allergic reactions induced by fluoroquinolones**
Eri HAMAMURA (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)
- P-64E Possible interaction of low dose ozone gas exposure with percutaneous oxygen saturation and pro-inflammatory responses in a mouse model of asthma and acute lung injury - Dose response study**
Chiharu OHIRA (Pharmacology Lab, Vet Med, Azabu Univ)

Cytotoxicity

P-65S Search for exogenous chemicals that cause α -synuclein aggregation

Ryohei MIKI (Department of Medicinal Pharmacology, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University)

P-66E Pentacyclic triterpenoid ursolic acid induces apoptosis with mitochondrial dysfunction in adult T-cell leukemia MT-4 cells to promote surrounding cell growth

Mengyue SHEN (University of Occupational and Environmental Health, Japan)

Oxidative stress

P-67S The inhibitory effects of reactive sulfur species (RSS) on oxidative stress-induced parthanatos

Yutaro YAMADA (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

P-68S Antioxidant systems involved in the vulnerability of the proximal tubule S3 region to cisplatin

Hiroki TAGUCHI (Faculty of Pharmaceutical Sciences, Tokushima Bunri University)

Mechanisms of toxicity

P-69S Analysis of the role of acyl-CoA synthetase long-chain family member 4 in paraquat-induced pulmonary toxicity

Yuki TOMITSUKA (Sch. of Pharmacy, Showa University)

P-70E Role of respiratory uncoupling in drug-induced mitochondrial permeability transition

Akinori TAKEMURA (Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University)

P-71S Molecular basis of the species difference between humans and rodents in liver tumor promotion by the nuclear receptor CAR

Natsuki MAKIDA (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)

P-72S Contribution of unfolded protein response to methylmercury-induced neurotoxicity in the mouse brain

Ryosuke NOMURA (Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Department of Medicinal Pharmacology, Okayama University)

P-73S Mechanistic investigation on distinct estrogenic and developmental responses to bisphenol analogues in zebrafish embryos

Xing CHEN (Department of Veterinary Medicine, Obihiro University of Agriculture and Veterinary Medicine)

P-74S Role of calcium signals in circulatory failure and spinal curvature caused by perfluorinated alkyl substances in developing zebrafish

Jae Seung LEE (Laboratory of Toxicology, Department of Veterinary Medicine, Obihiro University of Agriculture and Veterinary Medicine)

Cellular response

P-75E Contribution of the novel noncanonical functions of caspase-3 to the induction of parthanatos

Shuhei HAMANO (Lab. of Health Chem., Grad. Sch. of Pharmaceut. Sci., Tohoku Univ.)

P-76S Induction of fibrinolytic proteins in vascular endothelial cells by gamma-ray irradiation and its molecular mechanisms

Miyabi KOBAYASHI (Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-77S Safety and biocompatibility evaluation of carbon nanohorns with bone tissue

Katsuya UEDA (Division of Biomedical Engineering, Department of Biomedical Engineering, Graduate School of Medicine, Science and Technology, Shinshu University)

P-78S Transcriptional regulation of heparan sulfate proteoglycans expression by adenine metabolites in vascular endothelial cells

Lihito IKEUCHI (Faculty of Pharmaceutical Science, Tokyo University of Science)

■ Epigenetics

P-79S Epigenetic regulation via covalent modifications by environmental electrophiles

Tomoki TSUCHIDA (Department of Medicinal Pharmacology, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University)

■ Biomarkers

P-80E Examination of progression to mice steatohepatitis focusing on the detection of reactive oxygen species using MRI

Yuka YOSHINO^{1,2} (¹Sumitomo Pharma Co., Ltd, ²Graduate School of Frontier Biosciences, Osaka University)

■ Toxicity-testing methods

P-81E Establishment of an *in vitro* embryotoxicity assay using human iPS cells and its application to toxicity assessment

Megumi ISHIDA (CHUGAI PHARMACEUTICAL CO., LTD.)

■ Analytical method

P-82S Sensitive Detection of Monoamine Neurotransmitters Using Mass Spectrometry

Anri HIRAI (Laboratory of Toxicology, Faculty of Veterinary Medicine, Hokkaido University)

P-83S Simultaneous imaging analyses of elements and molecules using laser ablation-atmospheric pressure plasma-based mass spectrometry

Hui Hsin KHOO (Geochemical Research Center, School of Science, The University of Tokyo)

P-84S Development of microelectrode array (MEA) that enables real-time simultaneous measurement of extracellular potential and neurotransmitter release

Aiko HASEGAWA (Division of Electronical and Electronic Engineering, Department of Engineering, Tohoku Institute of Technology)

■ Alternatives to mammalian models

P-85E Validation of an artificial neural network model for risk assessment of skin sensitization using *in vitro* tests with metals and unknown structural compounds

Kosuke IMAI (Shiseido Co., LTD Brand Value R&D Institute)

- P-86S Development of a classification model for predicting drug-induced nephrotoxicity using machine learning methods**
Tatsuya SUNOUCHI (Division of Pharmacy, Faculty of Pharmaceutical Sciences, Okayama University)
- P-87S Development of a prediction model that classify irritation and corrosion of chemicals by machine learning method, and Search for structural alerts**
Takahiro KOYAMA (Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University)
- P-88S Development of a regression model to predict skin sensitization intensity using a machine learning approach**
Wataru MURASAKI (Department of Regulatory Science, Graduate School of Pharmaceutical Sciences, Nagoya City University)
- P-89S Evaluation of Skin Sensitization to Japanese Standard Allergens Using HaCaT**
Shintaro WATANABE (Laboratory of Environmental Hygiene, Department of Environmental Science, School of Life and Environmental Science, Azabu University)
- P-90S Development of a read-across method for evaluating developmental neurotoxicity: Utility of molecular descriptors for source substance selection**
Nao OMURA (Laboratory of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka)
- P-91E Reactive oxygen species (ROS) assay without using DMSO**
Toshiyuki OHTAKE (Shiseido Co., Ltd.)
- P-92S Osteogenesis evaluation of osteoblasts in different cell culture media: Towards the development of international standardized methods**
Makoto IZUMIYA (Division of Biomedical Engineering, Graduate School of Medicine, Science and Technology, Shinshu University)
- P-93E Non-animal testing strategy for assessment of skin sensitization of chemicals combining RhE based Testing Strategy (RTS) and read-across**
Sho SUZUKI (Kao Corporation)
- P-94E CHARACTERISTICS OF HUMAN IPSC-DERIVED SENSORY NEURONS AND ASSESSMENT OF DRUG RESPONSIVENESS**
Minami HIRANUMA (ReproCELL, Inc)

■ Clinical toxicology

- P-95E Consequences of medication errors in children**
Phantakan TANSUWANNARAT (Ramathibodi Hospital Mahidol University)

■ Hypersensitive subjects

- P-96S Carnivora (Mammalia, Laurasiatheria) specific evolutionary features and specific gene loss and duplication and in CYP450 1-3 families**
Mitsuki KONDO (Laboratory of Toxicology, Division of Environmental Veterinary Science, Graduate School of Veterinary Medicine, Hokkaido University)

■ Information technology, AI, and big data

- P-97S Development of machine learning-based prediction of drug-induced liver injury using FAERS**
Sarara DOI (Regulatory Science, Graduate School of Pharmaceutical Sciences, Nagoya City University)

P-98S Development of a wearable device for monitoring multiple vital signs in conscious and unrestrained rats

Shunpei KOJIMA (Graduate School of Engineering, Yokohama National University)

P-99S Induction Mechanism of Drug-induced Pruritus Using Food and Drug Administration Adverse Events Reporting System Database and Machine Learning

Yuriko NAKAO (Department of Medical Molecular Informatics, Meiji Pharmaceutical University)

Organoid

P-100S Evaluation of the risk of EGFR tyrosine kinase inhibitor-induced diarrhea with cultured intestinal stem cells originated from crypts in monkeys and humans

Yoshiki HASHIMOTO (Laboratory of Molecular Pharmacokinetics, Graduate School of Pharmaceutical Sciences, The University of Tokyo)

Day 2 PM (July 1 (Fri) 16:50 - 17:35) Poster&Exhibition Room

Pharmaceutical drugs (chemicals)

P-101 Impact of P-glycoprotein on intracellular drug concentration in peripheral blood mononuclear cells and K562 cells

Kohei ITO (Pharmacokinetics and Non-clinical Safety Dept. Nippon Boehringer-Ingelheim Co., Ltd.)

P-102 An approach to elucidate the mechanism of mesenteric venous sclerosis by combining adverse drug reaction database analysis and experimental methods

Shuhei NAKAO (Department of Pharmaceutical Sciences, Hyogo University of Health Sciences)

Middle molecular drugs

P-103 Establishment and implementation of a determination method of Nusinersen by peptide adsorption-controlled-LC-MS/MS in rat samples obtained by a microsampling technique

Rika DOSHO (LSI Medience Corporation)

Biopharmaceuticals

P-104 Investigation of the mechanism of cholesterol conjugated antisense oligonucleotide induced thrombocytopenia

Kosuke HARADA (Drug Safety Research & Evaluation, Pharmaceutical Research Division, Takeda Pharmaceutical Company Limited)

P-105 Anti-drug antibody formation by marketed antibody drugs in humans and its clinical consequences

Keisuke GODA (Applied Research & Operations, Astellas Pharma Inc.)

P-106 The development trends of new excipients based on the regulatory toxicity assessments and approval review reports for new pharmaceutical products during 10 years in Japan

Moritake IJIMA (Nagoya City University Graduate School of Medical Sciences and Medical School)

Agricultural chemicals

- P-107 The effects of neonicotinoids on neural differentiation of fetal brain derived neural progenitor cell line**

Yuki FUJIWARA (Department of Integrative Physiology, Gunma University Graduate School of Medicine)

- P-108 Assessing the Net Benefits of Organic Farming interventions in Ecosystem Preservation against Emerging Pesticides**

Collins NIMAKO (Laboratory of Toxicology, Department of Environmental Veterinary Sciences, Faculty of Veterinary Medicine, Hokkaido University, Hokkaido, Japan)

Metals

- P-109 Suppression of Nrf2-ARE pathway in vascular endothelial cells via the induction of Bach1 by TGF- β_1**

Tomoya FUJIE^{1,2} (¹Faculty of Pharmaceutical Sciences, Toho University, ²Faculty of Pharmaceutical Sciences, Tokyo University of Science)

- P-110 Cadmium-mediated down-regulation of TET1 is likely involved in the stimulated cell invasion during malignant transformation**

Masayo HIRAO-SUZUKI (Faculty of Pharmaceutical Sciences, Hiroshima International University)

- P-111 Optimization of the Hydrothermal Activation Treatment with Sodium Hydroxide Solution for the Conversion of Coal Fly Ash to Zeolite and Its Adsorption Capability of Lead (II) Ions from the Liquid Phase**

Fumihiko OGATA (Faculty of Pharmacy, Kindai University)

- P-112 Establishment of a model for impaired phosphorus and calcium reabsorption due to cadmium-induced renal injury**

Hitomi FUJISHIRO (Faculty of Pharmaceutical Sciences, Tokushima Bunri University)

- P-113 The protective role of DHA metabolites against methylmercury-induced neurotoxicity in the brain**

Ami OGURO (Graduate School of Biomedical and Health Sciences, Hiroshima University)

- P-114 Lead suppresses perlecan expression via EGFR-ERK1/2-COX-2/PGI₂ pathway in vascular endothelial cells**

Takato HARA (Faculty of Pharmaceutical Sciences, Toho University)

- P-115 ROCK1 contributes to the induction of oncostatin M expression by methylmercury**

Gi-Wook HWANG (Laboratory of Environmental and Health Sciences, Faculty of Pharmaceutical Sciences, Tohoku Medical and Pharmaceutical University)

- P-116 Potentiation of methylmercury toxicity by combined copper exposure: in vitro and in vivo models of a restricted metal exposome**

Yasuhiro SHINKAI^{1,2} (¹Faculty of Medicine, University of Tsukuba, ²Graduate School of Comprehensive Human Sciences, University of Tsukuba)

- P-117 Intracellular distribution of uranium in cultured renal tubular cells derived from the S3 region**

Shino HOMMA TAKEDA (National Institute of Radiological Sciences, National Institutes for Quantum Science and Technology)

P-118 Fundamental study on the detection of uranium in bio-fluids: preparation of droplet samples of serum

Akihiro UEHARA (National Institute of Radiological Sciences, National Institutes for Quantum Science and Technology)

P-119 Sulfane sulfur transition in the cells during methylmercury exposure

Takamitsu UNOKI (Department of Basic Medical Sciences, National Institute for Minamata Disease)

P-120 The effects of cadmium on the expression of HIF-1 and its regulated genes

Maki TOKUMOTO (School of Pharmacy, Aichi Gakuin University)

P-121 Arsenite induces expression of a reactive sulfur-producing enzyme cystathionine γ -lyase in cultured vascular endothelial cells

Tsutomu TAKAHASHI (Department of Environmental Health, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

P-122 Effect of arsenite exposure on the expression of fibrinolytic system factors in mouse vascular tissues

Yayoi TSUNEOKA (Department of Environmental Health, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

P-123 In vivo accumulation of different lead species in mice under environmentally relevance circumstance

Nyein Chan SOE^{1,2} (¹Laboratory of Toxicology, Department of Environmental Veterinary Science, Faculty of Veterinary Medicine, Hokkaido University, Japan, ²Department of Pharmacology and Parasitology, University of Veterinary Science, Myanmar)

Foods, food additives, and food contaminants

P-124 Re-evaluation of Liver Toxicity Induced by Coumarin in Food: An In Silico Approach for Refining Risk Assessment

Naruo KATSUTANI (Division of Risk Assessment, Center for Biological Safety Research, National Institute of Health Sciences)

P-125 Comparative study of regulatory systems in other countries to ensure the safety of “new foods”

Toshime IGARASHI (Division of Cellular & Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

Environmental pollutants

P-126 Involvement of polycyclic aromatic hydrocarbons and endotoxin in macrophage expression of interleukin-33 induced by exposure to particulate matter

Yasuhiro ISHIHARA^{1,2} (¹Program of Biomedical Science, Graduate School of Integrated Sciences for Life, Hiroshima University, ²Center for Health and the Environment, University of California, Davis)

P-127 Role of cysteine in inactivation of atmospheric quinones in extracellular space

Reiko HIROSE (Environmental Biology Laboratory, Faculty of Medicine, University of Tsukuba)

P-128 Health impact assessment of pet cats caused by organohalogen contaminants by serum metabolomics and thyroid hormone analysis

Kei NOMIYAMA (Center for Marine Environmental Studies (CMES), Ehime University)

- P-129 A novel system for air-liquid interface exposure to PM2.5 and application to skin 3D culture model**
Maori KONO^{1,2} (¹Graduate School of Pharmaceutical Sciences, Osaka University, ²Mandom Corporation)
- P-130 Investigation of pathways involved in premature senescence induction in human hepatic stellate cell line LX-2 by inorganic arsenic exposure using RNA-seq**
Kazuyuki OKAMURA (Health and Environmental Risk Division, National Institute for Environmental Studies)
- P-131 Adsorption Rate of Aromatic Hydrocarbons onto Activated Carbon in Gaseous Phase**
Naohito KAWASAKI (Laboratory of Public Health, Faculty of Pharmacy, Kindai University)
- P-132 Diphenylarsinic acid induced aberrant astrocyte activation including calpain activation in cultured rat cerebellar astrocytes**
Takayuki NEGISHI^{1,2} (¹Department of Physiology, Faculty of Pharmacy, Meijo University, ²Department of Physiology, Graduate School of Pharmacy, Meijo University)
- P-133 Wild Lizards as a Target of Heavy Metal Biomonitoring Focusing on Land Use Patterns; An Example from a Former Mining Site in Zambia**
Rio DOYA (Laboratory of Toxicology, Faculty of Veterinary Medicine, Hokkaido University, Japan)
- P-134 Oral exposure of mice to polystyrene microplastics enhances intestinal inflammation and metabolic disorder under high-fat diet**
Yuka HASEGAWA (Department of Endocrinology and Metabolism, Kyoto Prefectural University of Medicine, Graduate School of Medical Science)
- P-135 Effect of long-term arsenate treatment on erythropoietin production in HepG2 cells**
Haque MD ANAMUL (Laboratory of Toxicology, Course of Veterinary Sciences, Graduate School of Life and Environmental Biosciences, Osaka Prefecture University)
- P-136 Subchronic 13-week Inhalation Toxicity Study of sodium dichloroisocyanurate in Rats**
Min-Seok KIM (Inhalation Toxicity Research Group, Korea Institute of Toxicology)

■ Endocrine disruptors

- P-137 Tetrabromobisphenol A and hexabromocyclododecane, brominated flame retardants, activate necroptosis signaling in PC12 cells**
Akira NAKAJIMA (Department of Applied Biology and Food Sciences, Faculty of Agriculture and Life Science, Hirosaki University)
- P-138 Validation of yeast-based thyroid receptor reporter gene assay in *Homo sapiens* and *Xenopus tropicalis***
Masahiro OGAWA (Life Science Research Institute, Kumiai Chemical Industry Co., Ltd.)
- P-139 Establishment of *in vivo* and *in silico* evaluation method for anti-androgenic potency of environmental chemicals using zebrafish**
Akira KUBOTA (Department of Veterinary Medicine, Obihiro University of Agriculture and Veterinary Medicine)

P-140 Involvement of estrogen receptor β in the abnormal brain development in fetuses by maternal bisphenol A diglycidyl ether exposure during gestation and lactation

Ikuko MIYAZAKI (Department of Medical Neurobiology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences)

Nanomaterials

P-141 Effect of coexistence of hydroxylated fullerene and PFOS on larval zebrafish

Satomi MIZUKAMI MURATA (Public Works Research Institute)

P-142 Indium tin oxide nanoparticles induce interleukin-1 β -mediated epithelial-mesenchymal transition in alveolar epithelial cells

Yosuke Tabei (Health and Medical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST))

P-143 Toxicological study of nanosized titanium (IV) oxide

Jun-ichi AKAGI (Division of Pathology, National Institute of Health Sciences)

P-144 Safety evaluation and cellular response of nano-ferrite particles for 3D artificial autogenous bone

Chuang MA (Department of Biomedical Engineering, Graduate School of Medicine, Science and Technology, Shinshu University)

Nervous system

P-145 Development of an in vitro innervated skin model for the detection of adverse neuropathic events

Anne Mary DICKINSON (Alcyomics Ltd)

P-146 Quantitative analysis of developmental neurotoxicity using drebrin immunocytochemical images of cultured rat hippocampal neurons

Shogo MASE^{1,2} (¹Endowed Laboratory of Human Cell-Based Drug Discovery, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan, ²Department of Pharmacology, Gunma University Graduate School of Medicine)

P-147 RNA-Seq analysis of 1C11^{NE} neurons reveals important roles of microglia and proteasome pathway in environmental electrophile-induced neurodegeneration

Cai ZONG (Faculty of Pharmaceutical Sciences, Tokyo University of Science)

P-148 Study on the circadian rhythm in mice implanted with human stomach cancer cell lines

Motohide GOTO (Department of Occupational Toxicology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan)

P-149 Assessment of astrocyte reactions to seizurogenic compounds using MEA

Taeko KURODA (Graduate School of Engineering, Tohoku Institute of Technology)

P-150 In Vitro Gelatin Fiber Scaffold Model for Drug-induced Toxicity on Human iPS Cell-Derived Neuronal Cells

Toshiki SAOTOME^{1,2} (¹Grad. Sch. Pharmaceut. Sci., Univ. Tokyo, ²R&D Center, The Japan Wool Textile Co., Ltd.)

■ Cardio vascular system

- P-151 Multi-parameter evaluation for cardio toxicity of anti-cancer agents using Human iPSC derived cardiomyocytes cultured on gelatin fiber network**
Toshiki SAOTOME^{1,2,3} (¹Grad. Sch. Pharmaceut. Sci., Univ. Tokyo, ²R&D Center, The Japan Wool Textile Co., Ltd., ³Consortium for Safety Assessment using Human iPS Cells (CSAHi))
- P-152 Actions of Myosin Modulators on Contractility and Ca²⁺ Transient in the Adult Human Heart**
Najah ABI GERGES (AnaBios Corporation)
- P-153 Cardiovascular responses to infused histamine in anesthetized and conscious cynomolgus monkeys**
Ryo YAMASHITA (Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories, Ltd.)
- P-154 Cardiac Dysfunction in the Mouse Model of Cancer Cachexia and Therapeutic Effects of Voluntary Exercise**
Miki NONAKA (Department of Pain Control Research, The Jikei University School of Medicine)
- P-155 Effects of extracellular solution temperature and voltage-clamp protocol on concentration-response relationship in an *in vitro* hERG assay by manual patch clamp**
Masao OGUCHI (Ina Research Inc.)

■ Liver

- P-156 Automation and validation of the OrganoPlate LiverTox for hepatotoxicity detection**
Kristin M BIRCSAK (Mimetas)
- P-157 Development of a novel medium useful for hepatocyte studies**
Koji HASHIDA (Research and Development, Department Bioscience Section, NACALAI TESQUE, INC.)
- P-158 Liver Toxicity Observed With Lorlatinib When Combined With Strong CYP3A Inducers: Evaluation of Cynomolgus Monkey as a Nonclinical Model for Assessing the Mechanism of Combinational Toxicity**
Masanori KOBAYASHI (Drug Safety Research and Development, Pfizer Inc.)
- P-159 Implication of CYP for bioluminescence by luciferin analogue TokeOni in mice, pill bugs, and blow flies**
Atsushi NAKAMURA^{1,2} (¹Department of Engineering Science, Graduate School of Informatics and Engineering, The University of Electro-Communications, ²Center for Neuroscience and Biomedical Engineering, The University of Electro-Communications)
- P-160 Construction of doxycycline-inducible expression system of cytochrome P450 and UDP-glucuronosyltransferase in HEK 293 cells: analysis of their functions which depend to expression level**
Yuu MIYAUCHI (Faculty of Pharmaceutical Sciences, Sojo University)
- P-161 Investigations of the mechanisms of acetamide-induced hepatocarcinogenesis – Comparison of rat strain differences in AA toxicokinetic**
Yuji ISHII (Division of Pathology, National Institute of Health Sciences)

P-162 Contribution of CD44 expression in the bile duct epithelium to hepatic fibrosis of nonalcoholic steatohepatitis in rats

Kinuko UNO (Department of Nutritional Science and Food Safety, Faculty of Applied Bioscience, Undergraduate School of Tokyo University of Agriculture)

Kidney

P-163 An in vitro model MPS model of human glomerulus for high throughput drug safety studies

Colin DA BROWN (Newcells Biotech)

P-164 3D Nephroscreen: high throughput drug-induced nephrotoxicity screening on a microfluidic proximal tubule model

Linda GIJZEN (MIMETAS BV, Oegstgeest, The Netherlands)

P-165 Investigation of a way to measure the glomerular filtration rate in conscious mice using a novel ex vivo and in vivo hybrid IVIS imaging

Tetsuki KATO (Drug Safety Research & Development, Pfizer R&D Japan)

P-166 Investigation of potential of CD44 as a urinary biomarker to evaluate renal fibrosis using allopurinol-induced renal fibrosis model rats

Kohei MATSUSHITA (Division of Pathology, National Institute of Health Sciences)

P-167 Effect of a novel hepatitis B antiviral drug in renal organic acid transporters

Hirofumi HASHIMOTO (Department of Pharmacology, Chiba University Graduate School of Medicine)

Sensory organ

P-168 Quantitative data of thickness of each retinal layer and full-field electroretinogram in cynomolgus monkeys

Megumi SAKATA (Shin Nippon Biomedical Laboratories, Ltd. Drug Safety Research Laboratories)

Gastrointestinal system

P-169 Analysis of RAS/RAF and the efficacy and safety in combination therapy with FOXFOX + Cetuximab in patients with stage III-IV colorectal carcinoma

Yasuna KOBAYASHI (Division of Educational Planning and Assessment, Department of Pharmacy Education, Showa University)

Endocrine system

P-170 Comparison of histopathological and immunohistochemical analyses with blood hormone levels for detection of antithyroid effects in rats treated with promoters of thyroid hormone metabolism

Hirotooshi AKANE (Division of Pathology, National Institute of Health Sciences)

General toxicology

P-171 Effects of reduced food intake on blood and tissue alkaline phosphatase in rats

Junya MORITA (Drug Safety, Drug Safety and Pharmacokinetics Laboratories, Taisho Pharmaceutical Co., Ltd.)

P-172 Four-week Repeated Subcutaneous Dose Toxicity Study of Corn Oil in Rats

Fumika AKIZAWA (Department of Drug Safety Research, Nonclinical Research Center, Tokushima Research Institute, Otsuka Pharmaceutical Co., Ltd.)

- P-173 Toxicity profiling of AAV9 empty capsids in mice**
Ryo WATANABE (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)
- P-174 Variation of blood examination values in juvenile beagles (Study 1)
Physical development and blood biochemical changes from the birth to the weaning time**
Yuki SUEHIRO (Hongo Farm, Kitayama Labes Co., Ltd.)
- P-175 Variation of blood examination values in juvenile beagles (Study 2)
Changes in hematological and biochemical values from 2 weeks to 16 weeks of age**
Miharu OKAGAWA (Hongo Farm, Kitayama Labes Co., Ltd.)
- P-176 Four-week Repeated Oral Dose Toxicity Study of Zinc Maltol in Male Rats**
Masaya HITOMI (Department of Drug Safety Research, Nonclinical Research Center, Otsuka Pharmaceutical Co., Ltd.)
- P-177 The Safety and Efficacy of the Liquid Form of Traditional Chinese Medicine, Hozen-S, in dogs**
Yuta SHINOHARA^{1,2} (¹Laboratory of Veterinary Pharmacology, Department of Veterinary Medicine, Faculty of Agriculture, Tokyo University of Agriculture and Technology, ²Pet Health & Food Division, Iskara Industry CO., LTD)
- P-178 Investigation of Intrathecal Injection Method and Animal Parameters with the Aim of Improving Drug Delivery to the Cisterna Magna in Cynomolgus Monkeys**
Kaoru KOBAYASHI (Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories (SNBL), Ltd.)]

Reproductive and developmental toxicology

- P-179 Issue and its solution for reproductive and developmental toxicity study (3)
Interpretation for the results of reproductive and developmental toxicity study**
Yusuke KAGAWA^{1,2} (¹Novartis Pharma K.K., ²KT2 Task Force, Non-clinical Evaluation Expert Committee, Japan Pharmaceuticals Manufacturers Association)
- P-180 Issue and its solution for reproductive and developmental toxicity study (2)
- The optimal maximum dose setting in the reproductive and developmental toxicity study -**
Kyohei NISHIMURA^{1,2} (¹Shionogi Co., Ltd., ²KT2 Task Force, Non-clinical Evaluation Expert Committee, Japan Pharmaceuticals Manufacturers Association)
- P-181 Case studies and decision tree for determining the need of juvenile animal studies for pediatric drug development**
Hiroshi MINESHIMA^{1,2} (¹Non-Clinical Evaluation Expert Committee, Drug Evaluation Committee, The Japan Pharmaceutical Manufacturers' Association of Japan, ²Department of Drug Safety Research, Otsuka Pharmaceutical Co., Ltd.)
- P-182 Reproductive and neurobehavioral effects of maternal exposure to dinotefuran in the F₁-generation mice**
Toyohito TANAKA (Department of Pharmaceutical and Environmental Sciences, Tokyo Metropolitan Institute of Public Health)

P-183 Issue and its solution for reproductive and developmental toxicity study (1) - Survey results related to preliminary embryo-fetal developmental toxicity study -

Tsukasa ISHIGURO^{1,2} (¹SANWA KAGAKU KENKYUSHO Co., Ltd., ²KT2 Task Force, Non-clinical Evaluation Expert Committee, Japan Pharmaceuticals Manufacturers Association)

P-184 Reproductive and developmental safety of nirmatrelvir (PF-07321332), an oral SARS-CoV-2 Mpro inhibitor in animal models

Yuji ISOBE (Drug Safety Research & Development Tokyo, Pfizer R&D Japan)

P-185 2,3,7,8-Tetrachlorodibenzo-p-dioxin induces pericardial edema independent of heart malformation in larval zebrafish

Wenjing DONG (School of Veterinary Medicine, Rakuno Gakuen University)

Day 3 PM (July 2 (Sat) 13:00 - 13:45) Poster&Exhibition Room

Genetic toxicology

P-186 GSTP1 Gene Polymorphism in Children Associated with Lead Exposure

Yared Beyene YOHANNES^{1,2} (¹Laboratory of Toxicology, Department of Environmental Veterinary Sciences, Faculty of Veterinary Medicine, Hokkaido University, ²Department of Chemistry, University of Gondar, Gondar, Ethiopia)

P-187 Time-course changes of DNA damage in comet assay using corneal epithelial cells in rabbits following ocular instillation with genotoxicants

Haruna TAHARA (Senju Pharmaceutical Co., Ltd. Research & Development Division)

P-188 Automatic analysis of the micronucleus test with rat bone marrow using a virtual slide system

Yasuhiro IWATA (Department of Investigative Toxicology, Nonclinical Research Center, Tokushima Research Institute, Otsuka Pharmaceutical Co., Ltd.)

P-189 Erythropoietin increases the frequency of micronucleus induction by alkylating agents through mismatch repair

Keiichi ITOH (BioSafety Research Center)

P-190 Determination of mechanisms of hepatocarcinogenicity and quantitative cancer risk assessment of 1,4-dioxane

Min GI^{1,2} (¹Department of Environmental Risk Assessment, Osaka Metropolitan University Graduate School of Medicine, ²Department of Molecular Pathology, Osaka Metropolitan University Graduate School of Medicine)

Carcinogenicity

P-191 Global DNA methylation profiling of the target renal tubular region for carcinogenicity in rats after 90-day repeated administration of ochratoxin A

Shunsuke OZAWA^{1,2} (¹Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology, ²Cooperative Division of Veterinary Sciences, Graduate School of Agriculture, Tokyo University of Agriculture and Technology)

P-192 Effects of urinary metabolites of *o*-toluidine associated with occupational urinary bladder cancer on urinary bladder

Shugo SUZUKI (Department of Molecular Pathology, Osaka Metropolitan University Graduate School of Medicine)

Behavioral toxicology

- P-193 Etizolam and zolpidem in combination could cause delayed motor-coordination impairment at clinical doses**

Kentaro ANDO (Department of Pharmacology, Faculty of Pharmacy, Chiba Institute of Science)

Immunotoxicology

- P-194 Chromatin state changes in human T cells to reduce cytokine release after priming treatment with T-cell redirecting bispecific antibody *in vitro***

Yoshika IWATA (Translational Research Division, Chugai Pharmaceutical Co., Ltd.)

- P-195 Association of *HLA-A*11:01* with sulfonamide-related severe cutaneous adverse reactions in Japanese**

Ryosuke NAKAMURA (Division of Medicinal Safety Science, National Institute of Health Sciences)

Cytotoxicity

- P-196 Relationship between regulation of erythropoietin production by trivalent chromium and PPAR γ in HepG2 cells**

Kazuhiko NISHIMURA (Laboratory of Bioenvironmental Sciences, Course of Veterinary Science, Graduate School of Life and Environmental Sciences, Osaka Prefecture University)

- P-197 Effect of Erythropoietin Administration on Erythropoietin Production in HepG2 Cells**

Takuya SAKAKI (Laboratory of Toxicology, Course of Veterinary Science, Department of life and Environmental Science, Osaka Prefecture University)

- P-198 Enhancement of Azithromycin Action in Caco-2 Cells by the Presence of Polystyrene Particles**

Daichi YOSHIKUMI (Laboratory of Toxicology, Course of Veterinary Science, Department of Life and Environmental Science, Osaka Prefecture University)

- P-199 Effects of Metal Compounds on Itch Mediator Production by Human Keratinocytes**

Yuka MIZUKAWA (Laboratory of Toxicology, Course of Veterinary Science, Department of Life and Environmental Science, Osaka Prefecture University)

- P-200 Involvement of Na⁺/H⁺ exchangers (NHE) as a regulator of polystyrene particle uptake in Caco-2 cells**

Hiroshi NAKAGAWA (Laboratory of Toxicology, Course of Veterinary Science, Graduate School of Life and Environmental Biosciences, Osaka Prefecture University)

- P-201 Effects of phosphonium-based ionic liquids with various alkyl chain lengths and ammonium-based ionic liquids on cytotoxicity**

Ryosuke SUDA (Department of Drug Metabolism and Molecular Toxicology, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

- P-202 Cellular effects of chemically modified and mechanically defibrillated cellulose nanofibrils**

Katsuhide FUJITA (National Institute of Advanced Industrial Science and Technology)

■ Oxidative stress

P-203 Heated tobacco products and their constituents induce cell death via an iron-dependent manner in murine photoreceptor cell line 661W cells

Wataru OTSU (Department of Biomedical Research Laboratory, Gifu Pharmaceutical University)

P-204 Relationship between induction of insulin resistance and selenoprotein expression in skeletal muscle in diabetic mouse model

Hirofumi OGINO (Department of Public Health & Preventive Pharmacology, Faculty of Pharmaceutical Sciences, Setsunan University)

P-205 Gut microbiota enhances host antioxidant capacity via the generation of reactive sulfur species

Masahiro AKIYAMA (Research Center for Drug Discovery, Faculty of Pharmacy and Graduate School of Pharmaceutical Sciences, Keio University)

■ Mechanisms of toxicity

P-206 The effect of acetaminophen on zebrafish embryonic thyroid

Huan WANG (Inner Mongolia Key Laboratory of Toxicant Monitoring and Toxicology)

P-207 The position of nitro group affects the mutagenicity of nitroarenes

Kiyoshi FUKUHARA (Division of Organic and Medicinal Chemistry, Showa University School of Pharmacy)

P-208 Expression of Vitamin D metabolizing enzymes in human tissues and its individual difference

Kanako KOIKE (Yokohama University of Pharmacy)

■ Cellular response

P-209 Transient Receptor Potential Melastatin 8, a sensor of cold temperatures mediates expression of cyclin-dependent kinase inhibitor, p21/Cip1, a regulator of epidermal cell proliferation

Tomofumi FUJINO (Department of Hygiene and Health Sciences, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences)

■ Molecular toxicology

P-210 Proteomic analysis of NAFLD mice liver mitochondria following exposure to hepatotoxic drug

Kazuma HAMADA (Biopharmaceutics and Molecular Toxicology Unit, Faculty of Pharmaceutical Sciences, Teikyo Heisei University)

■ Epigenetics

P-211 Endocrine disrupting chemicals (EDCs) induce transgenerational epigenetic inheritance (TEI)

Tohru SHIBUYA (Laboratory of Environmental Epigenetics)

P-212 Environmental disruptors could induce transgenerational epigenetic inheritance (TEI) via retrotransposons

Yukiharu HORIYA (Laboratory of Environmental Epigenetics)

P-213 Genome-wide DNA methylation analysis in the testes of F2 male mice gestationally exposed to arsenic

Takehiro SUZUKI (National Institute for Environmental Studies)

P-214 Association of prenatal lead and antimony exposure with global DNA methylation in cord blood

Yoshinori OKAMOTO (Faculty of Pharmacy, Meijo University)

Biomarkers

P-215 Development of the early detection method for renal carcinogenicity of chemicals using γ -H2AX as a biomarker

Takeshi TOYODA (Division of Pathology, National Institute of Health Sciences)

Toxicity-testing methods

P-216 Safety pharmacology studies for cardiovascular systems in ferrets conform with 'Best Practice Considerations for In Vivo Studies'

Akihito ITO (NISSEI BILIS Co., Ltd)

P-217 Investigation of positive control cells for intravenous tumorigenicity studies

Hiroyuki KANEMITSU (BoZo Research Center Inc.)

P-218 Preliminary study of simplification of Microelectrode array (MEA) data analysis method for in vitro convulsive risk detection

Ai OKAMURA^{1,2} (¹Astellas Pharma Inc., ²Consortium for Safety Assessment using Human iPS Cells)

P-219 Detection of abnormal sexual differentiation of internal reproductive organs using Japanese quail fertilized eggs

Natsuko ABE (Graduate School of Science and Engineering, Saitama University)

P-220 Examination of the usefulness of 8-MOP in rat retinal phototoxicity assessment

Keigo IKEDA (Preclinical Research Unit, Drug Research Division, Sumitomo Pharma Co., Ltd.)

P-221 Searching for molecular markers to detect abnormalities of brain sexual differentiation in birds

Akari SAKIYAMA (Graduate School of Science and Engineering, Saitama University)

P-222 Contractility evaluation using human induced pluripotent stem cell-derived cardiomyocytes

Sanae ISHII (Pharmaceutical & ADMET Research Department, Discovery Pharmacokinetics Research Group, Daiichi Sankyo RD Novare Co., Ltd.)

P-223 The value of human iPS cell-derived dendritic cells and mast cells in drug discovery research

Jumpei KIYOKAWA (Translational Research Division, Chugai Pharmaceutical Co., Ltd.)

P-224 Assessment of in vitro seizure evaluation system using in vivo data

Takafumi SHIRAKAWA (Astellas Pharma Inc.)

P-225 Effect of microsampling method on toxicity evaluation of azathioprine in repeated dose toxicity studies in rats

Shun KAWAGUCHI (LSIM Safety Institute Corporation)

P-226 The utility and limitations of assessing cardiac safety using the Motion Field Imaging of human iPS cell-derived cardiomyocytes

Chisato KANEKO (Translational Research Division, Chugai Pharmaceutical Co., Ltd.)

P-227 The performance evaluation of Bone marrow mode of XN-V series, Software of Automated Hematology Analyzer for Animal, using rat and mouse bone marrow samples

Seiichiro TSUCHIYA (Regent Engineering, Cell Technology, Sysmex Corporation)

P-228 Evaluation of drug response using liver spheroids with different pore structure

Yoshihiko WATANABE (Yokohama City University)

P-229 Development of a method for predicting pain and mechanism of action of compounds based on firing of single DRG neuron

Naoki MATSUDA (Department of Electronics, Graduate School of Engineering, Tohoku Institute of Technology)

P-230 Toxicity assessment using in vitro peripheral nerve culture device and AI image analysis

Xiaobo HAN (Graduate School of Engineering, Tohoku Institute of Technology)

P-231 The Use of Nonclinical Common Protocol and Report Templates: Phase I Pilot Results

Chinami NEKOMOTO (Shionogi & Co., Osaka, Japan)

Analytical method

P-232 Development of a high-resolution melting-based assay for the discriminating SARS-CoV-2 Omicron sub-lineages BA.1 and BA.2

Akira AOKI (Faculty of Pharmacy, Meijo University)

P-233 Withdrawal

Toxicokinetics

P-234 Pharmacokinetics of acetaminophen in zebrafish after forced oral administration

Yasushi MISAWA (Toxicology & Environmental Science Department, Nissan Chemical Corporation)

Toxicologic pathology

P-235 INHAND: International Harmonization of Nomenclature and Diagnostic Criteria for Lesions - An Update - 2022

Shim-mo HAYASHI^{1,2} (¹National Institute of Health Sciences, ²Tokyo University of Agriculture and Technology)

Alternatives to mammalian models

P-236 Construction and Case Studies of New Predictive Models for Skin Sensitizations of Substances with Known Structure

Yuri HATAKEYAMA (SHISEIDO CO., LTD. Brand Value R&D Institute)

P-237 Construction of a three-dimensional sensory stimulus evaluation model focusing on the stimulus mechanism

Masayuki TAKAISHI^{1,2} (¹Mandom Corp., ²Laboratory of Advanced Cosmetic Science, Graduate School of Pharmaceutical Sciences, Osaka University)

- P-238 An exploratory study for expanding the applicability domain of *in vitro* skin irritation testing**
Hidefumi IKEDA (Mandom Corporation)
- P-239 Characteristics of small intestinal epithelial cells derived from human induced pluripotent stem cells and usefulness as an *in vitro* model for gastrointestinal disease**
Shinji MIMA (Bio Science & Engineering Laboratory, FUJIFILM Corporation)
- P-240 Collection of fundamental data of amino acids by cytotoxicity tests using Balb/c 3T3 cells -Promotion of alternative methods for animal experiments-**
Yusuke SHIBUI (Product Evaluation Group, Evaluation & Analysis Section, Research Institute for Bioscience Products & Fine Chemicals, Ajinomoto Co., Inc.)
- P-241 The strategy of incorporating the histopathological examination into the Bovine Corneal Opacity and Permeability (BCOP) test – Construction of the histopathological prediction model for UN GHS –**
Yukie ABIKO (Safety Research Institute for Chemical Compounds Co., Ltd)
- P-242 Development of an Alternative Oral Mucosal Irritation Test Using a Three-dimensional Human Buccal Oral Mucosal Model -Analysis of Mechanisms of Toxicity in Mucosal Cells-**
Seiya AIZAWA (LION Corporation, Research & Development Headquarters, Safety Science Research Laboratories)

■ Animal model

- P-243 Optimization of histamine and histamine H₄ receptor agonist-induced allergic conjunctivitis model in guinea pigs**
Hidemi MOCHIZUKI (Ina Research Inc.)
- P-244 *In vitro* and *in vivo* short-term toxicity assessment for predicting drug-induced steatosis using chimeric mice with humanized livers**
Seigo SANOH^{1,2} (¹School of Pharmaceutical Sciences, Wakayama Medical University, ²Graduate School of Biomedical and Health Sciences, Hiroshima University)
- P-245 Measurements of volume in NIBS minipigs using a computed tomography scanner**
Tadashi ITOH (Nihon Bioresearch Inc.)

■ Endocrine disruptors

- P-246 Uterotrophic bioassay of 4,4'-(1,3-dimethylbutylidene) diphenol, a bisphenol analog, using ovariectomized mice by subcutaneous and oral administration**
Toshime IGARASHI (Division of Cellular & Molecular Toxicology, Center for Biological Safety & Research, National Institute of Health Sciences)

■ Clinical toxicology

- P-247 Lead poisoning following ingestion of Buddhist amulets**
Phantakan TANSUWANNARAT (Ramathibodi Hospital Mahidol University)
- P-248 Development of an atopic dermatitis induced skin explant model to assess disease onset and drug efficacy *in vitro***
Anne Mary DICKINSON (Alcyomics Ltd)

P-249 An in vitro model of drug-induced Stevens-Johnson syndrome/ toxic epidermal necrolysis (SJS/TEN)

Anne Mary DICKINSON (Alcyomics Ltd)

P-250 Effects of hemoglobin on post-mortem metabolism of bromazepam

Yoshikazu YAMAGISHI (Center for Education and Research in Legal Medicine, Graduate School of Medicine, Chiba University)

Hypersensitive subjects

P-251 Abundant nutritional environment exacerbates pancreatic fibrosis and glucose intolerance caused by fetal growth restriction

Atsuto ONODA (Faculty of Pharmaceutical Sciences, Sanyo-Onoda City University)

Risk assessment and communication

P-252 Physicochemical properties factor of titanium dioxide nanoparticles on activation of THP -1 cells

Akiko OHNO (Division of Risk Assessment, Center for Biological Safety & Research, National Institute of Health Sciences)

P-253 Application of New Approach Method (NAM) to Hepatotoxicity Assessment of Pyrrolizidine Alkaloids

Takashi YAMADA (Division of Risk Assessment, Center for Biological Safety Research, National Institute of Health Sciences)

P-254 GHS classification study of substances that caused occupational accident

Yoshiyuki SHIGETA (National Institute of Health Sciences, Division of Risk Assessment)

P-255 Comparison of the cleaning limits derived from PDE based on systemic effects and the acceptable surface limits based on skin sensitizing effects

Asako FUKUSHIMA (Chemicals Evaluation and Research Institute, Japan)

P-256 Mutagenicity evaluation for quantitative evaluation of carcinogenicity in the risk assessment I for human health: Reexamination of the existence or non-existence of carcinogenicity threshold

Kazuo USHIDA (Division of Risk Assessment, Biological Safety Research Center, National Institute of Health Sciences)

P-257 Best practices for storing electronic data of retired systems -Example of temperature / humidity monitoring system-

Daisuke SASAKI^{1,2} (¹Japan Society of Quality Assurance, ²Astellas Pharma Inc.)

P-258 Research on the conditions for management of nitrosamines based on their mutagenicity and carcinogenicity potential

Kaoru INOUE (Division of Risk Assessment, National Institute of Health Sciences)

P-259 Derivation of a target value of perfluorooctanoic acid in drinking water

Mariko MATSUMOTO (Division of Risk Assessment, National Institute of Health Sciences, Japan)

P-260 Evaluation of the *in vivo* mutagenicity of carbendazim

Takako ISO (Division of Risk Assessment, National Institute of Health Sciences)

P-261 Differences in human hazard assessments of existing chemicals by different evaluation organizations and their scientific backgrounds

Akira KAWASHIMA (National Institute of Health Sciences, Division of Risk Assessment)

P-262 The gene mutation test of styrene using the transgenic mouse

Yasumasa MURATA (National Institute of Health Sciences)

Information technology, AI, and big data

P-263 Use of Empirical Bayes Geometric Mean Gamma Poisson Shrinker (EBGM) Scores to Measure Animal-Human Concordance for Safety Studies

Toshikazu DEWA (Life Science Solutions, Elsevier)

P-264 QC automation for external SEND numerical data using KNIME

Kyotaka MUTA (Toxicology Research Laboratories, Central Pharmaceutical Research Institute, Japan Tobacco Inc.)

P-265 Assessing feasibility of models for predicting hERG current inhibition using in silico physicochemical properties

Ayako SAGISAKA (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)

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Takashi UOTA^{1,2} (¹CDISC Japan User Group SEND team, ²EP Croit Co., Ltd.)

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Takashi TANAHARU^{1,2} (¹Bristol-Myers Squibb K.K., ²SEND TaskForce, Non-clinical Evaluation Expert Committee, Drug Evaluation Committee, Japan Pharmaceuticals Manufacturers Association)

P-268 Proposal for Efficient Collaboration Process for Creating a SEND Data Package between Sponsors-CROs

Takayuki YASUDA^{1,2} (¹CDISC Japan User Group SEND team, ²Chugai Pharmaceutical Co., Ltd.)

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Susumu SUYAMA (Ina Research Inc.)

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Chihiro NAKAZAWA^{1,2} (¹CDISC Japan User Group (CJUG) SEND team, nSDRG subteam, ²Eisai Co., Ltd.)

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Yuta SAKAKIBARA^{1,2} (¹CDISC Japan User Group SEND team, ²Kyowa Kirin Co., Ltd.)

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Shun KAWAI (Sumitomo Chemical Co., Ltd.)

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