Program

September 4 (Monday)

9:00 ~ 9:05  Opening Remark
The 24th Annual Meeting of the Japanese Society of Immunotoxicology
President: Kazuichi Nakamura
The 72nd Meeting of Allergy and Immunotoxicology study group of Japan Society for Occupational Health
Coordinator: Takahiko Yoshida

9:05 ~ 9:50  Keynote Lecture (VTR)
Chairperson  Kazuichi Nakamura (Kitasato University)

KL-01  Immunotoxicology: A Historical Perspective
  ○ Jack H. Dean
  Department of Pharmacology & Toxicology, College of Pharmacy at the University of Arizona, USA

9:50 ~ 10:35  Oral Presentations 1  <O-01 ~ O-03>
Chairpersons  Eiko Koike (Center for Health and Environmental Risk Research, National Institute for Environmental Studies)
              Katsunori Yamaura (Faculty of Pharmacy, Keio University)

O-01  Possible interaction between estrogen and allergic respiratory inflammation
  ○ Risako Tajiki, Emi Makino, Yuko Watanabe, Tomoki Fukuyama
  The Institute of Environmental Toxicology

O-02  Possible involvement of estrogen receptors on pro-inflammatory response in mice model of allergic dermatitis
  Emi Makino, Risako Tajiki, Yuko Watanabe, ○ Tomoki Fukuyama
  The Institute of Environmental Toxicology

O-03  Gosha-jinki-gan recover the intact spermatogenesis in busulfan-induced immunotoxicology and aspermatogenesis in mice
  ○ Ning Qu1, Masahiro Itoh2, Hayato Terayama1, Kenta Nagahori2, Miyuki Kuramasu2, Yuki Ogawa2, Ko Sakabe1
  1Department of Anatomy, Division of Basic Medical Science, Tokai University School of Medicine, Kanagawa, Japan, 2Department of Anatomy, Tokyo Medical University, Tokyo, Japan
10:35 ~ 11:05  Students and Young Scientists Session  <SY-01 ~ SY-03>
Chairperson  Yasuo Yoshioka (Research Institute for Microbial Diseases, Osaka University)

SY-01  Comparison of skin sensitization potential of isocyanates by a Local Lymph Node Assay and an Integrated Testing Strategy with an in silico, in chemico and in vitro assays
○ Toshiyuki Ohtake, Yosuke Maeda, Tae Hayashi, Hidenori Yamanaka, Makoto Nakai, Masahiro Takeyoshi
Chemicals Assessment and Research Center, Chemicals Evaluation and Research Institute (CERI), Japan

SY-02  Analysis of mechanism of skin-specific drug toxicities using the cells derived from HLA-Tg mice
○ Sota Fujimori, Shigeki Aoki, Takeshi Susukida, Kousei Ito
Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University, Japan

SY-03  Reproduction of idiosyncratic liver injury by abacavir using HLA transgenic mouse
○ Binbin Song, Shigeki Aoki, Takeshi Susukida, Kousei Ito
Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University, Japan

11:10 ~ 11:55  Poster Presentations  <P-01 ~ P-22>
(* indicates applicants for Students and Young Scientists Award)

*P-01  Comparison of skin sensitization potential of isocyanates by a Local Lymph Node Assay and an Integrated Testing Strategy with an in silico, in chemico and in vitro assays
○ Toshiyuki Ohtake, Yosuke Maeda, Tae Hayashi, Hidenori Yamanaka, Makoto Nakai, Masahiro Takeyoshi
Chemicals Assessment and Research Center, Chemicals Evaluation and Research Institute (CERI), Japan

*P-02  Analysis of mechanism of skin-specific drug toxicities using the cells derived from HLA-Tg mice
○ Sota Fujimori, Shigeki Aoki, Takeshi Susukida, Kousei Ito
Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University, Japan

*P-03  Reproduction of idiosyncratic liver injury by abacavir using HLA transgenic mouse
○ Binbin Song, Shigeki Aoki, Takeshi Susukida, Kousei Ito
Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University, Japan
P-04 Changes of testosterone in murine testes due to long-term exposure of acetamiprid
○ Hayato Terayama¹, Ning Qu¹, Hitoshi Endo², Masayuki Tatemichi⁴, Kou Sakabe¹
¹Department of Anatomy, Tokai University School of Medicine, ²Department of Preventive Medicine, Tokai University School of Medicine

P-05 The impact of dietary exposure of bisphenol A in a mouse model of allergic asthma
○ Rie Yanagisawa¹, Eiko Koike¹, Tin Tin Win Shwe¹, Hirohisa Takano²
¹National Institute for Environmental Studies, ²Kyoto University

P-06 Effects of dietary administration of bisphenol A on lymphoid tissues in a mouse model of allergic asthma
○ Eiko Koike¹, Rie Yanagisawa¹, Tin Tin Win Shwe¹, Hirohisa Takano²
¹National Institute for Environmental Studies, ²Kyoto University

P-07 Effects of exposure to bisphenol A on memory function and neuroimmune biomarkers in allergic asthmatic mice
○ Tin Tin Win Shwe¹, Rie Yanagisawa¹, Eiko Koike¹, Hirohisa Takano²
¹Center for Health and Environmental Risk Research, National Institute for Environmental Studies, ²Graduate School of Engineering, Kyoto University

P-08 Particulate Matter 2.5 suppresses immune response in splenocytes by oxidative stress
○ Yasuhiro Yoshida, Cuiying He, Kentaro Morita
Department of Immunology and Parasitology, University of Occupational and Environmental Health, Japan

P-09 Study of stress responses induced by asbestos in MT-2 cells
○ Hidenori Matsuzaki¹, Suni Lee¹, Megumi Maeda², Naoko Kumagai-Takei¹, Kei Yoshitome¹, Yasumitsu Nishimura¹, Takemi Otsuki¹
¹Department of Hygiene, Kawasaki Medical School, ²Department of Biofunctional Chemistry, Division of Bioscience, Okayama University Graduate School of Natural Science and Technology

P-10 The expression change of oxidative phosphorylation (OXPHOS)-related complexes and ROS production in human T cell lines, MT-2 and its sub-line continuously exposed to asbestos fibers.
Shoko Yamamoto, ○ Suni Lee, Hidenori Matsuzaki, Tamayo Hatayama, Naoko Kumagai-Takei, Kei Yoshitome, Yasumitsu Nishimura, Takemi Otsuki
Department of Hygiene, Kawasaki Medical School
Specific association of the rs6500265 and rs9933632 SNPs in Japanese patients with cold medicine-related Stevens–Johnson syndrome and toxic epidermal necrolysis with severe ocular involvements

Yoshimi Okamoto-Uchida1, Ryosuke Nakamura1, Kayoko Matsunaga2, Michiko Aihara3, Yoshito Saito1
1Division of Medicinal Safety Science, National Institute of Health Sciences, Tokyo, Japan, 2Department of Integrative Medical Science for Allergic Disease, School of Medicine, Fujita Health University, Aichi, Japan, 3Department of Environmental Immuno-Dermatology, Graduate School of Medicine, Yokohama City University, Kanagawa, Japan

Utility of Chimeric HLA Transgenic Mice for Evaluating Immune-Mediated Idiosyncratic Drug Toxicity

Shigeki Aoki, Takeshi Susukida, Sota Fujimori, Binbin Song, Kousei Ito
Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University, Japan

Role of NF-κB in the anti-inflammatory effects of PXR in drug-induced liver injury

Maya Okamura, Taiki Abe, Satoshi Tsuruta, Ryota Shizu, Takumi Hosaka, Takamitsu Sasaki, Kouichi Yoshinari
Department of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka

Electron microscopic observation of a novel cytoplasmic rods and rings structure (RR) induced by ribavirin and methotrexate (MTX)

Tamiji Nakashima1, Shin Tanaka1, Minoru Satoh2
1Department of Human, Information and Life Sciences, School of Health Sciences, 2Department of Clinical Nursing, School of Health Sciences, University of Occupational and Environmental Health, Japan

Evaluation of Pruritus in Psoriatic Mouse Model Induced by Imiquimod and Exploring the Factors Associated with Pruritus

Nobuo Oishi1, Hiroki Iwata1, Noriko Kobayashi1, Kazuko Fujimoto1, Hiromi Sato2, Akihiro Hisaka2, Katsunori Yamaura1
1Division of Social Pharmacy, Center for Social Pharmacy and Pharmaceutical Care Sciences, Faculty of Pharmacy, Keio University, 2Laboratory of Clinical Pharmacology and Pharmacometrics, Graduate School of Pharmaceutical Sciences, Chiba University

Gene expression profiles of di-(2-ethylhexyl) phthalate and its metabolite mono-(2-ethylhexyl) phthalate in human macrophage-like THP-1 cells

Hiroyuki Kojima1, Shinji Takeuchi1, Ryuta Muromoto2, Reiko Kishi2, Atsuko Araki2
1Hokkaido Institute of Public Health, 2Graduate School of Pharmaceutical Sciences, Hokkaido University, 3Center for Environmental and Health Sciences, Hokkaido University
P-17  Titanium dioxide nanomaterial suppresses antigen-presenting and antigen-upuptaking of THP-1-derived dendritic cells
○ Shinobu Sakai, Maiko Tahara, Keisuke Soga, Reiko Adachi, Kazunari Kondo, Yoshiaki Ikarashi
National Institute of Health Sciences

P-18  Tfh cells and DCs are involved in particulate-induced iBALT formation in the lungs through IL-1α release
○ Etsushi Kuroda¹, Ken J Ishii¹²
¹National Institutes of Biomedical Innovation, Health and Nutrition (NiBIOHN), ²WPI Immunology Frontier Research Center (IFReC), Osaka University

P-19  Development of humanized mouse model capturing early responses against vaccination and its application to vaccine safety evaluation method
○ Eita Sasaki, Hanaka Momose, Yuki Hiradate, Keiko Furuhata, Takuo Mizukami, Isao Hamaguchi
Department of Safety Research on Blood and Biological Products, National Institute of Infectious Disease

P-20  Evaluation of biolayer interferometry method to detect anti-drug antibodies using anti-EPO antibody reference standard panel
○ Hiroko Shibata¹, Kazuko Nishimura¹, Chizuru Miyama¹, Minoru Tada¹, Takuo Suzuki¹, Yoshiro Saito², Akiko Ishii-Watabe¹
¹Division of Biological Chemistry and Biologicals, National Institute of Health Sciences, ²Division of Medicinal Safety Science, National Institute of Health Sciences

P-21  Artifacts on immune-related protein levels caused by inadequate preparation of the plasma samples
○ Ryosuke Nakamura¹, Noriaki Arakawa¹, Keiko Maekawa¹², Yoshiro Saito¹
¹National Institute of Health Sciences, ²Doshisha Women's College of Liberal Arts

P-22  Comparison of hemolysis reagents and sample volumes for cynomolgus monkey peripheral blood immunophenotyping
○ Aiko Sakai, Takayuki Asahi, Takanori Sugimoto
Drug Safety Research Laboratories, Nippon Biomedical Laboratories, Ltd.
LS-01 Unraveling Immunotoxicological Assays for Agrochemical and Pharmaceutical Industries
○ Vanessa L. Peachee, MS, PhD
  Director, Immunotoxicology, Charles River Laboratories Ashland, LLC

13:05 ~ 13:50 General Assembly

13:55 ~ 14:45 Award Ceremony "JSIT Research Award" and Award Lecture
Chairpersons Teshima Reiko (Pharmaceuticals and Medical Devices Agency, Office of Cellular and Tissue-based Products/Office of OTC/Quasi-drugs)
Keiko Nohara (Center for Health and Environmental Risk Research, National Institute for Environmental Studies)

AL-01 Differential immunologic responses in mice exposed to low levels of volatile organic compounds
○ Hidekazu Fujimaki
  National Institute for Environmental Studies

AL-02 The role of skin immunotoxicity induced by topical steroid therapy in chronic pruritic skin diseases
○ Katsunori Yamaura
  Division of Social Pharmacy, Center for Social Pharmacy and Pharmaceutical Care Sciences, Faculty of Pharmacy, Keio University
14:50 ~ 16:50  Symposium “Reproductive immunotoxicology: Immunological mechanism of pregnancy and its breakdown”
Chairpersons Hayato Terayama (Department of Anatomy, Division of Basic Medicine, Tokai University School of Medicine)
Kazuhiro Shimomura (Vaccine Research Laboratories, Kitasato Daiichi Sankyo Vaccine Co., Ltd.)

S-01  Immunological Changes during Pregnancy in Cows
☐ Yosuke Maeda
Laboratory of Clinical Veterinary Medicine for Large Animal, Kitasato University, Japan

S-02  Immune-tolerance in the placenta
☐ Yoshie Kametani
Department of Molecular Life Science, Division of Basic Medical Science, Tokai University School of Medicine

S-03  Regulatory T cells are important for implantation and maintenance of pregnancy
☐ Tomoko Shima, Akitoshi Nakashima, Shigeru Saito
Department of Gynecology and Obstetrics, University of Toyama

S-04  Mechanisms of pregnancy complications caused by nanoparticles: possible role of sterile inflammation (inflammasomes) during pregnancy
☐ Kourai Shirasuna¹, Nao Tanikawa¹, Ayae Ozeki¹, Akihide Ohkuchi², Masafumi Takahashi³
¹Department of Animal Science, Tokyo University of Agriculture, ²Jichi Medical University

17:00 ~ 17:50  Special Lecture 1
Chairperson  Yoshiro Saito (National Institute of Health Sciences)

SL-01  Involvement of immune-related factors on idiosyncratic drug-induced liver injury
☐ Tsuyoshi Yokoi
Nagoya University Graduate School of Medicine

18:30 ~ 20:30  Banquet and Award Ceremony for Students and Young Scientists Award (Sun Royal Towada)
O-04 The immunological differences between patients with diffuse pleural thickening and malignant mesothelioma

○ Yasumitsu Nishimura, Suni Lee, Naoko Kumagai-Takei, Hidenori Matsuzaki, Kei Yoshitome, Kenzo Okamoto, Takumi Kishimoto, Takemi Otsuki

1Dept. of Hygiene, Kawasaki Medical School, 2Hokkaido Chuo Rosai Hospital, 3Okayama Rosai Hospital

O-05 Altered functions of human CD8+ T cell line caused by long-term exposure to asbestos fibers

○ Naoko Kumagai-Takei, Yasumitsu Nishimura, Hidenori Matsuzaki, Suni Lee, Kei Yoshitome, Takemi Otsuki

Department of Hygiene, Kawasaki Medical School

O-06 The mechanism of inflammatory responses in the Th2-lymphocytes derived from the spleen of Zn-deficient rats

○ Takamasa Kido, Kenji Ishiwata, Shingo Yogosawa, Wataru Yoshioka, Machi Suka, Hiroyuki Yanagisawa

1Department of Public Health and Environmental Medicine, Jikei University School of Medicine, 2Department of tropical medicine

O-07 Organotins suppress antigen-specific immune responses by modulating dendritic cell maturation via signaling pathway of retinoid X receptor.

○ Tsuyoshi Nakanishi, Akiko Ido, Youhei Hiromori, Hisamitsu Nagase

1Laboratory of Hygienic Chemistry and Molecular Toxicology, Gifu Pharmaceutical University, 2Faculty of Pharmaceutical Sciences, Suzuka University of Medical Science
9:40 ~ 10:40  Oral Presentations 3  <O-08 ~ O-11>
Chairpersons  Hiroyuki Kojima (Hokkaido Institute of Public Health)
                Seishopro Hirano (National Institute for Environmental Studies)

O-08  Regulation of myeloid-derived suppressor cells by glutamate signaling
○ Masashi Tachibana1,2, Naosuke Morikawa2, Yukio Aso4, Hirosi Goda2, Fuminori Sakurai2,
       Hiroyuki Mizuguchi2,3,5
1Laboratory of Biotechnology and Therapeutics, Graduate School of Pharmaceutical Sciences, Osaka
       University, 2Laboratory of Biochemistry and Molecular Biology, Graduate School of Pharmaceutical
       Sciences, Osaka University, 3Global Center for Medical Engineering and Informatics, Osaka
       University, 4Laboratory of Molecular Neuropharmacology, Graduate School of Pharmaceutical
       Sciences, Osaka University, 5Laboratory of Hepatocyte Regulation, National Institutes of Biomedical
       Innovation, Health and Nutrition

O-09  Different regulation of IL-1β release in murine macrophages
○ Seishiro Hirano1, Akiko Furuyama1, Sanae Kanno2
1Natl. Inst. Environ. Studies, 2Nagoya City Univ.

O-10  Role of JAK family kinases in IL-17-induced keratinocyte activation
○ Ryuta Muramoto, Keisuke Tawa, Yui Ohgakiuchi, Tadashi Matsuda
Department of Immunology, Faculty of Pharmaceutical Sciences, Hokkaido University

O-11  Skin sensitization model by quantitative structure-activity relationships (QSAR) based
       on alert structure of sensitizer and non-sensitizer
○ Kazuhiro Sato1, Jose Martin Ciloy2, Yukinori Kusaka1
1Department of Environmental Health, University of Fukui, 2Fujityu Kyushu Systems Limited (FJQS)

10:40 ~ 11:30  Educational Lecture
Chairperson  Etsushi Kuroda (Center for Vaccine and Adjuvant Research (CVAR), National Institutes
                of Biomedical Innovation, Health and Nutrition (NIBIOHN))

EL-01  Autoimmune diseases induced by virus infections
○ Takeharu Minamitani, Teruhito Yasui
National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN)
Laboratory of Infectious Diseases and Immunity

11:40 ~ 12:30  Luncheon Seminar 2 (Shin Nippon Biomedical Laboratories, Ltd.)

LS-02  Evaluation methods for cell and gene therapy products in SNBL
○ Asako Uchiyama, Izumi Hiroyuki
iPS Cell Therapy Support Unit, Preclinical Research Support Division, Shin Nippon Biomedical
Laboratories, Ltd.
12:40 ~ 13:30  Special Lecture 2
Chairperson  Akiko Ishii-Watabe (National Institute of Health Sciences)

SL-02  Immunotoxicity Assessment of Biopharmaceuticals
  ○ Danuta Herzyk, PhD
  Merck Research Laboratories, Merck & Co, USA

13:30 ~ 15:30  Workshop  “The latest developments in the safety evaluation method of
biopharmaceuticals (protein formulations)”
Chairpersons  Tetsuo Aida (Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.)
Shigeru Hisada (Innovative Drug Discovery Division, ASKA Pharmaceutical Co., Ltd.)

WS-01  Outline and Points to Note on the Safety Evaluation Method of Biopharmaceuticals
  ○ Akiko Ishii-Watabe¹, Yoshiro Saito²
  ¹Division of Biological Chemistry and Biologicals, National Institute of Health Sciences, ²Division of
Medicinal Safety Science, National Institute of Health Sciences

WS-02  Consideration for Preclinical Safety Evaluation of Biotechnology-Derived
Pharmaceuticals
  ○ Kazushige Maki
  Toxicology, Pharmaceutical and Medical Devices Agency

WS-03  Characteristic test methods in biopharmaceutical nonclinical evaluation
  - Evaluation methods using human cells-
  ○ Chiyomi Kubo, Tomoaki Inoue
  Chugai Pharmaceutical Co., Ltd, Research Division

WS-04  Nonclinical safety assessment of antibody drug conjugates
  ○ Tetsuo Aida
  Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.

15:30 ~ 15:40  Award Ceremony
  “The Best Presenter Award”