

Program

September 6 (Monday)

9:00 ~ 9:10 Opening Remark

The 28th Annual Meeting of the Japanese Society of Immunotoxicology

President: Reiko Teshima

The 78th Meeting of Allergy and Immunotoxicology study group of Japan Society for Occupational Health

Coordinator: Takahiko Yoshida

9:10 ~ 11:50 Students and Young Scientists Session <Y-01 ~ Y-08>

Chairperson: Yasuo Yoshioika (Research Institute for Microbial Diseases, Osaka University),

Shigeki Aoki (Graduate School of Pharmaceutical Sciences, Chiba University)

Y-01 Identification of carbon nanotube receptors

○Sin-Ichiro Yamaguchi¹, Masanobu Morita², Fumiya Ito^{3,4}, Qilin Xie¹, Shinya Toyokuni^{3,4}, Masafumi Nakayama^{1,4}

¹Ritsumeikan University, ²Tohoku University Graduate School of Medicine,

³Nagoya University Graduate School of Medicine, ⁴CREST, JST

Y-02 Spatiotemporal features of health effects of crude PM in Japan and key components of PM contributing to health effects

○Zaoshi Wang¹, Akiko Honda^{1,2}, Tomoaki Okuda³, Shuichi Hasegawa⁴, Takayuki Kameda⁵, Susumu Tohno⁵, Masahiko Hayashi⁶, Chiharu Nishita-Hara⁶, Keiichiro Hara⁶, Kozo Inoue⁷, Kayo Ueda^{1,2}, Hirohisa Takano^{1,2}

¹Graduate School of Engineering, Kyoto University, ²Graduate School of Global Environmental Studies, Kyoto University, ³Faculty of Science and Technology, Keio University, ⁴Center for Environmental Science in Saitama, ⁵Graduate School of Energy Science, Kyoto University, ⁶Fukuoka Institute of Atmospheric Environment and Health, Fukuoka University, ⁷TOKYO DYLEC CORP.

Y-03 Impact of ozone gas exposure on percutaneous oxygen saturation and immune function in a mouse model of acute lung injury

○Chiharu Oohira¹, Kengo Tomita², Chiharu Hayakawa¹, Takashi Kurihara², Tomoki Fukuyama¹

¹Laboratory of Veterinary Pharmacology, Veterinary Medicine, Azabu University,

²Center for Environmental, Institute of Technology, SHIMIZU CORPORARION

Y-04 Participation of CD44 in Hepatic Fibrosis of Non-alcoholic Steatohepatitis in Rats

○Kinuko Uno¹, Noriko Kemuriyama², Katsuhiko Miyajima², Dai Nakae²

¹Department of Food and Nutritional Science, Faculty of Agriculture, Graduate School of Tokyo University of Agriculture, ²Department of Nutritional Science and Food Safety, Faculty of Applied Biosciences, Undergraduate School of Tokyo University of Agriculture

Y-05 Increase (not decrease) of regulatory T cells associated with fetal loss caused by skewed Th1/Th2 balance toward Th1 side in abortion-prone mouse model

○Miho Sakakibara¹, Yosuke Maeda¹, Ryo Kamata¹, Kazuichi Nakamura¹

¹School of Veterinary Medicine, Kitasato University

Y-06 Molecular mechanisms of type I interferonopathy in a novel COPA syndrome model mouse

○Takashi Kato¹, Takashi Orimo¹, Yuri Fukuda-Ohta¹, Naoko Wakaki-Nishiyama¹, Chihiro Nakai¹, Izumi Sasaki¹, Kohei Murakami², Hiroaki Hemmi², Yoshitaka Honda^{3,4,5}, Kazushi Izawa⁵, Yoshiro Otsuki⁶, Tadashi Matsubayashi⁷, Ryuta Nishikomori⁸, Tsuneyasu Kaisho¹

¹Department of Immunology, Institute of Advanced Medicine, Wakayama Medical University ²Laboratory of Immunology, Faculty of Veterinary Medicine, Okayama University of Science, ³Institute for the Advanced Study of Human Biology (ASHBi), Kyoto University, ⁴Department of Immunology, Kyoto University Graduate School of Medicine, ⁵Department of Pediatrics, Kyoto University Graduate School of Medicine, ⁶Department of Pathology, Seirei Hamamatsu General Hospital, ⁷Department of Pediatrics, Seirei Hamamatsu General Hospital, ⁸Department of Pediatrics and Child Health, Kurume University School of Medicine

Y-07 Establishment of antisense screening method for innate immune activation via TLR9

○Misato Tanaka¹, Shogo Matsumura¹, Kiyoshi Kushima¹, Ko Omura¹

¹Drug Safety Research Laboratories, Astellas Pharma Inc.

Y-08 Analysis of the inhibitory mechanism of vialinin A (VA) on TNF- α production in RBL-2H3 cells

○Shota Yokota¹, Jun-ichi Onose¹, Kouichi Sugatani¹, Naoki Abe¹

¹Graduate School of Applied Bioscience, Tokyo University of Agriculture

13:00 ~ 13:50 Oral Presentation <O-01 ~ O-03>

Chairperson: Yasumitsu Nishimura (Department of Hygiene, Kawasaki Medical School)

O-01 An endoplasmic reticulum stress sensor IRE1 α is involved in cholera toxin-induced interleukin-1 β production from tissue resident macrophages

○Izumi Sasaki¹, Yuri Fukuda-Ohta¹, Naoko Wakaki-Nishiyama¹, Chihiro Nakai¹, Shuhei Morita², Daisuke Okuzaki³, Mika Kaku¹, Kanta Sawase¹, Takashi Kato¹, Takashi Orimo¹, Koichi Furukawa⁴, Tsuneyasu Kaisho¹

¹Department of Immunology, Institute of Advanced Medicine, Wakayama Medical University, ²First Department of Medicine, Wakayama Medical University,

³Genome Information Research Center, Research Institute for Microbial Diseases, Osaka University, ⁴Department of Lifelong Sports and Health Sciences, Chubu University College of Life and Health Sciences

O-02 Mechanism of aggravation in the intestinal immune system due to zinc deficiency and the effects of IL-4 administration or zinc supplementation

○Takamasa Kido¹, Machi Suka¹, Hiroyuki Yanagisawa¹

¹The Jikei University School of Medicine

O-03 Induction of IL-1 α releases from murine keratinocytes by 2-hydroxyethyl methacrylate and its inhibition by N-acetyl cysteine

○Toshinobu Kuroishi¹, Takahiro Kaji¹, Kanan Bando^{1, 2}, Masatoshi Takahashi³, Shunji Sugawara¹

¹Division of Oral Immunology, ²Division of Orthodontics and Dentofacial Orthopedics, ³Division of Dental Biomaterials, Tohoku University Graduate School of Dentistry

14:00 ~ 14:50 Education Lecture 1 <EL-01>

Chairperson:Yoshiro Saito (National Institute of Health Sciences)

EL-01 The significance of allergy and innate lymphocytes (ICL2) from the evolutionary perspective

○Kenji Matsumoto¹

¹National Research Institute for Child Health and Development

15:00 ~ 17:00 Symposium <S-01 ~ S-03>

“The development status of various vaccine and their safety evaluation”

Chairperson:Etsushi Kuroda (Department of Immunology, Hyogo College of Medicine),

Izumi Sasaki (Institute of Advanced Medicine, Wakayama Medical University)

S-01 MicroRNAs associated with adverse reactions of vaccine

○Hiroyuki Oshiumi¹, Momoka Nakashima¹, Yusuke Miyashita¹

¹Department of Immunology, Faculty of Life Sciences, Kumamoto University

S-02 Safety assessment of nasal vaccine

○Yoshikazu Yuki^{1,2}

¹HanaVax Inc., ²Institute of Medical Science, University of Tokyo

S-03 Screening for a safe and effective novel vaccine adjuvant using genomics technology

○Eita Sasaki¹

¹Department of Safety Research on Blood and Biological Products, National Institute of Infectious Diseases

17:10 ~ 18:00 Special Lecture 1 <SL-01>

Chairperson: Hiroaki Hemmi (Veterinary Medicine, Okayama University of Sciences)

SL-01 Dendritic cell- based new immunotherapy

○Shin-ichiro Fujii^{1,2}

¹Laboratory for Immunotherapy, RIKEN Center for Integrative Medical Sciences

²RIKEN Program for Drug Discovery and Medical Technology Platforms

18:10 ~ 18:25 Special Message

From Dr. Mitchell. D. Cohen (SOT ITSS)

September 7 (Tuesday)

8:40 ~ 9:40 Oral Presentation <O-04 ~ O-07>

Chairperson: Eiko Koike (National Institute for Environmental Studies),
Ryosuke Nakamura (National Institute of Health Sciences)

O-04 Construction of carbamazepine-induced cutaneous disorder model using HLA-A*31:01 knock-in mice

○Maho Ichikawa¹, Akira Kazaoka¹, Naomoto Harada², Shigeki Aoki¹, Kosei Ito¹

¹Graduate School of Pharmaceutical Sciences, Chiba University, ² TAIHO PHARMACEUTICAL CO., LTD.

O-05 Association of *HLA-DRB1*04:05* allele with drug-induced interstitial lung disease in Japanese population

○Yoshiro Saito¹, Takuya Imatoh¹, Masao Ota², Atsuhito Ushiki², Masayuki

Hanaoka²

¹National Institute of Health Sciences, ²Shinshu University, School of Medicine

O-06 Effects of benzotriazole UV stabilizers on induction of splenic regulatory T cells through activation of aryl hydrocarbon receptor

○Atsuhito Kubota¹, Masaru Terasaki¹, Ryuta Muromoto², Hideshige Takada³, Hiroyuki Kojima¹

¹Pharmaceutical Sciences, Health Sciences University of Hokkaido, ²Graduate School of Pharmaceutical Sciences, Hokkaido University ³Faculty of Agriculture, Tokyo University of Agriculture and Technology

O-07 Benzo[a]pyrene enhances IL-17 response via AhR-mediated Regnase-1 suppression

○Ryuta Muromoto¹, Kota Nariya¹, Yuka Saino¹, Tadashi Matsuda¹

¹Department of Immunology, Faculty of Pharmaceutical Sciences, Hokkaido University

9:50 ~ 10:40 Education Lecture 2 <EL-02>

Chairperson: Reiko Teshima (Veterinary Medicine, Okayama University of Sciences)

EL-02 About the new corona vaccine

○Yasuhiro Yoshikawa¹

¹Faculty of Veterinary Medicine, Okayama University of Sciences

10:45 ~ 11:40 Awardee Presentation <AL-01, AL-02>

Chairperson: Hiroyuki Kojima (Health Science University of Hokkaido)

JSIT Award Lecture

AL-01 Immunotoxic effects and mechanisms of dioxin

○Keiko Nohara¹

¹National Institute for Environmental Studies

JSIT Young Investigator Award Lecture

AL-02 Immunotoxicity depending on myeloid-derived suppressor cells in tumor-bearer

○Masashi Tachibana^{1,2}

¹Graduate School of Pharmaceutical Sciences, Osaka University

²MEIC., Osaka University

12:40 ~ 13:30 Special Lecture 2 <SL-02>

Chairperson: Chiyomi Kubo (CHUGAI PHARMACEUTICAL CO., LTD.)

SL-02 Immunogenicity-related toxicity

○Dr. Jeanine Bussiere¹

¹Scientific Executive Director of Toxicology, Amgen Inc.

13:30 ~ 15:25 Workshop <WS-01 ~ WS-03>

“Toward the development and guidance of in vitro immunotoxicity test method”

Chairperson: Seiji Kushima (Astellas Pharma Inc)

Tetsuya Sakairi (Mitsubishi Tanabe Pharma Corporation)

WS-01 The current status of Multi-ImmunoToxicity Assay (MITA)

○Setsuya Aiba^{1,2}, Yutaka Kimura^{1,3}, Takao Ashikaga⁴, Hajime Kojima⁴

¹Department of Dermatology, Tohoku University School of Medicine, ²Matsuda Hospital, Dermatology Clinic, ³Kimura Ophthalmology Clinic, ⁴National Institute of Health Sciences

WS-02 Development of an alternative test method (ADRA) for skin sensitization and adoption into OECD test guideline

○Masaharu Fujita¹, Yusuke Yamamoto¹, Toshihiko Kasahara¹

¹FUJIFILM Corporation, Safety Evaluation Center

WS-03 Skin sensitization OECD guideline based on IATA Defined Approach

○Takao Ashikaga¹

¹National Institute of Health Sciences

15:30 Closing Remark

【Poster Presentation by Web <P-01 ~ P-15, Y-01 ~ Y-08> September 3rd to 7th】

(For the 9 presentations of the young session, posters will be posted as well as the oral presentation)

P-01 In vitro effects of D4-siloxane on bone marrow-derived dendritic cells (BMDCs)

Risako Tajiki¹, Hitoshi Tajima¹, Yuko Watanabe¹, Takashi Kakimoto², Takashi Kurihara², Hiroaki Aoyama¹○Tadashi Kosaka¹

¹Toxicology Division, Institute of Environmental Toxicology, ²Institute of Technology, SHIMIZU CORPORATION

P-02 Oral exposure to bisphenol S altered neurobehaviors and related gene expressions in allergic asthmatic mice

○Tin-Tin Win-Shwe¹, Rie Yanagisawa¹, Eiko Koike¹

¹Health and Environmental Risk Division, National Institute for Environmental Studies

P-03 Effects of oral exposure to bisphenol S on immune cells in allergic asthmatic mice

○Eiko Koike¹, Rie Yanagisawa¹, Tin-Tin Win-Shwe¹

¹Health and Environmental Risk Division, National Institute for Environmental Studies

P-04 Effects of oral exposure to bisphenol S on allergic pulmonary inflammation in mice

○Rie Yanagisawa¹, Eiko Koike¹, Tin-Tin Win-Shwe¹

¹Health and Environmental Risk Division, National Institute for Environmental Studies

P-05 Induction of THP-1 cells activation by silicon dioxide nanomaterials

○Takao Ashikaga¹, Asuka Nishida², Akiko Ohno¹, Kazutomo Iijima²

¹National Institute of Health Sciences, ²Yokohama National University

P-06 Silica exposure to human PBMC altered the mRNA expression and the cytokine production.

○Sun Lee¹, Yasumitsu Nishimura¹, Takemi Otsuki²

¹Department of Hygiene, Kawasaki Medical School, ²Shinjo Village National Health Insurance Clinic

P-07 Relationship between immunological characteristics of peripheral blood and efficacy in the treatment of Nivolumab in patients with malignant mesothelioma.

○Yasumitsu Nishimura¹, Sun Lee¹, Naoko Takei¹, Tatsuo Ito¹, Nobukazu Fujimoto², Toshiyuki Kozuki³, Takemi Otsuki^{1,4}

¹Department of Hygiene, Kawasaki Medical School, ²Department of Medical Oncology, Okayama Rosai Hospital, ³Department of Thoracic Oncology and Medicine, Shikoku Cancer Center, ⁴Shinjo-son National Health Insurance Clinic

P-08 Involvement of Th2 cytokines, eotaxin, and periostin in the development of asthma in arsenic-polluted areas in Bangladesh

○Seiichiro Himeno^{1,2}, Daigo Sumi², Keiko Nohara³, Khaled Hossain⁴

¹School of Pharmacy, Showa University, ²Faculty of Pharmaceutical Sciences, Tokushima Bunri University, ³NIES, ⁴Rajshahi University

- P-09 Skimune®, an in vitro human skin explant assay to predict adverse immune reactions associated with Low Molecular Weight Drugs and Biologics**
○AM Dickinson¹ and S Ahmed¹.
¹Alcyomics Ltd, Newcastle upon Tyne, United Kingdom
- P-10 Development of an in vitro model of drug-induced toxic epidermal necrosis.**
○A Dickinson¹, SS Ahmed¹, DF Carr², A Olsson-Brown², M Pirmohamed².
¹Alcyomics Ltd, Newcastle upon Tyne, United Kingdom, ²University of Liverpool, Liverpool, United Kingdom
- P-11 Fcγ receptor-dependent internalization and off-target cytotoxicity of antibody-drug conjugate aggregates**
○Michihiko Aoyama¹, Minoru Tada¹, Akiko Ishii-Watabe¹
¹Natinal Institute of Health Sciences
- P-12 Mitochondrial permeability transition as a trigger of immune-mediated drug-induced liver injury in obese type 2 diabetes**
○Kazuma Hamada, Takashi Mizuma
Biopharmaceutics and Molecular Toxicology Unit, Faculty of Pharmaceutical Sciences, Teikyo Heisei University
- P-13 Regulatory considerations on evaluation and risk mitigating strategies for immunogenicity of therapeutic protein products**
○Akiko Ishii-Watabe¹, Hiroko Shibata¹, Kazuko Nishimura¹, Yoshiro Saito²
¹Division of Biological Chemistry and Biologicals, ²Division of Medicinal Safety Science, National Institute of Health Sciences
- P-14 Significant association of *HLA-A*11:01* with sulfa drug-related severe cutaneous adverse reactions in Japanese**
○Ryosuke Nakamura¹, Takeshi Ozeki², Noriaki Hirayama³, Akihiro Sekine⁴, Yoshiko Mizukawa⁵, Tetsuo Shiohara⁵, Hideaki Watanabe⁶, Hirohiko Sueki⁶, Kohei Ogawa⁷, Hideo Asada⁷, Eri Tsukagoshi¹, Kayoko Matsunaga⁸, Hiroyuki Niihara⁹, Yukie Yamaguchi¹⁰, Michiko Aihara¹⁰, Taisei Mushiroda², Yoshiro Saito¹, Eishin Morita⁹
¹National Institute of Health Sciences, ²RIKEN, ³Tokai University, ⁴Chiba University, ⁵Kyorin University, ⁶Showa University, ⁷Nara Medical University, ⁸Fujita Health University, ⁹Shimane University, ¹⁰Yokohama City University
- P-15 Role of lysosomes as an intracellular degradation system for cytotoxicity caused by traffic-related air pollution in bronchial epithelial cells**
○Akira Onodera¹, Eiko Fukutomi¹, Takuya Shimomura¹, Hirohisa Ochi¹, Ryuto Sunada¹, Yuichi Kawai¹
¹Faculty of Pharmaceutical Sciences, Kobe Gakuin University