

# The 27<sup>th</sup> Annual Meeting of the Japanese Society of Immunotoxicology Program

September 26 (Saturday)

■ 10 : 00 ~ 10 : 05 Opening Remark

The 27<sup>th</sup> Annual Meeting of the Japanese Society of Immunotoxicology

President: Masashi Tsunoda

■ 10 : 10 ~ 13 : 55 Students and young Scientists Session < Y-01 ~ Y-08 >

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

Eiko Koike (National Institute for Environmental Studies)

■ 10 : 10 ~ 10 : 25

Y-01 Comparison between impact of oral exposure to Fumonisin B1 and B2 on the development of cutaneous allergy

○ Ai Morimoto<sup>1</sup>, Toa Ookawara<sup>1</sup>, Ryota Aihara<sup>1</sup>, Naoki Iwashita<sup>1,2</sup>, Yoshiichi Takagi<sup>1,3</sup>,  
Tomoki Fukuyama<sup>1</sup>

<sup>1</sup> Azabu university, <sup>2</sup>Bioalchemis, <sup>3</sup>Japan SLC,Inc.

■ 10 : 30 ~ 10 : 45

Y-02 Acute and subacute oral toxicity of deoxynivalenol exposure in a *Dermatophagoides farinae* induced murine asthma model

○ Toa Ookawara<sup>1</sup>, Ryota Aihara<sup>1</sup>, Ai Morimoto<sup>1</sup>, Naoki Iwashita<sup>1,2</sup>, Yoshiichi Takagi<sup>1,3</sup>,  
Atsushi Miyasaka<sup>4</sup>, Masayo Kushiro<sup>5</sup>, Shiro Miyake<sup>1</sup>, Tomoki Fukuyama<sup>1</sup>

<sup>1</sup> Azabu university, <sup>2</sup> Bioalchemis, <sup>3</sup> Japan SLC,Inc., <sup>4</sup> Kyushu Okinawa Research Center, NARO,  
<sup>5</sup> Food Research Institute, NARO

■ 10 : 50 ~ 11 : 05

Y-03 Impact of oral exposure to trichothecene mycotoxin Deoxynivalenol on the development of psoriasis in an imiquimod-induced mouse model

○ Ryota Aihara<sup>1</sup>, Toa Ookawara<sup>1</sup>, Ai Morimoto<sup>1</sup>, Naoki Iwashita<sup>1,2</sup>, Yoshiichi Takagi<sup>1,3</sup>,  
Atsushi Miyasaka<sup>4</sup>, Masayo Kushiro<sup>5</sup>, Shiro Miyake<sup>1</sup>, Tomoki Fukuyama<sup>1</sup>

<sup>1</sup> Azabu university, <sup>2</sup> Bioalchemis, <sup>3</sup> Japan SLC,Inc., <sup>4</sup> Kyushu Okinawa Research Center, NARO,  
<sup>5</sup> Food Research Institute, NARO

■ 11 : 10 ~ 11 : 25

Y-04 HLA allotype-specific skin toxicity using HLA transgenic mice

○ Yushiro Yamada, Shigeki Aoki, Sota Fujimori, Kousei Ito

Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University

■ 11 : 30 ~ 11 : 45

**Y-05 Involvement of immunosuppressive systems in expression of HLA dependent drug hypersensitivity caused by Abacavir**

○ Saki Kuwahara<sup>1</sup>, Takeshi Susukida<sup>1,2</sup>, Shigeki Aoki<sup>1</sup>, Kousei Ito<sup>1</sup>

<sup>1</sup>Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University,

<sup>2</sup>Institute of Natural Medicine, University of Toyama

Chairperson Hiroyuki Kojima, Yasumitsu Nishimura

■ 13 : 00 ~ 13 : 15

**Y-06 The effect of triterpenoids ursolic acid and oleanolic acid on mitochondria in adult T cell leukemia cells.**

○ Mengyue Shen, Ryoko Baba, Kentaro Morita, Duo Wang, Yusuke Sennari, Tamotsu Kanazawa, Yasuhiro Yoshida

Department of Immunology and Parasitology, School of Medicine, University of Occupational and Environmental Health, Japan

■ 13 : 20 ~ 13 : 35

**Y-07 Immunotoxicity of G-CSF through myeloid-derived suppressor cells in tumor-bearing mice**

○ Yuuto Murata<sup>1</sup>, Takahiro Kawasaki<sup>1</sup>, Daisuke Okuzaki<sup>2,3</sup>, Naoki Okada<sup>1</sup>, Masashi Tachibana<sup>1,4</sup>

<sup>1</sup>Graduate School of Pharmaceutical Sciences, Osaka University,

<sup>2</sup>World Premier International Research Center Immunology Frontier Research Center, Osaka University,

<sup>3</sup>The Research Institute for Microbial Diseases, Osaka University,

<sup>4</sup>Global Center for Medical Engineering and Informatics, Osaka University

■ 13 : 40 ~ 13 : 55

**Y-08 Involvement of TLR Signaling on liver fibrosis of nash in rats fed cdaa diet**

○ Kinuko Uno<sup>1</sup>, Katsuhiko Miyajima<sup>1,2,3</sup>, Noriko Kemuriyama<sup>3</sup>, Dai Nakae<sup>1,2,3</sup>

<sup>1</sup>Department of Food and Nutrition Science, Faculty of Agriculture, Graduate School of Tokyo University of Agriculture,

<sup>2</sup>Department of Nutritional Science and Food Safety, Faculty of Agriculture, Graduate School of Tokyo University of Agriculture,

<sup>3</sup>Department of Nutritional Science and Food Safety, Faculty of Applied Biosciences, Tokyo University of Agriculture

**■ 14 : 00 ~ 15 : 40 Symposium: Immunotoxicology, Past, Present and Future**

Chairperson: Yasuo Yoshioka (Institute for Open and Transdisciplinary Research Initiatives, Osaka University)  
Katsunori Yamaura (Keio University)

■ 14 : 00 ~ 14 : 25

**S-01 Role of gut microbiota in Theiler's virus model for multiple sclerosis: Max Theiler and Hideyo Noguchi**

○ Ikuo Tsunoda<sup>1</sup>, Shigemitsu Toriyama<sup>2</sup>

<sup>1</sup>Department of Microbiology, Kindai University Faculty of Medicine,

<sup>2</sup>Faculty of Agriculture, the University of Tokyo

■ 14 : 30 ~ 14 : 55

**S-02 Vaccine Safety: Current Status and Challenges in the Development of Safe Potent Vaccines**

○ Yasuo Yoshioka

<sup>1</sup>Institute for Open and Transdisciplinary Research Initiatives, Osaka University,

<sup>2</sup>Research Institute for Microbial Diseases, Osaka University,

<sup>3</sup>The Research Foundation for Microbial Diseases, Osaka University,

<sup>4</sup>Graduate School of Pharmaceutical Sciences, Osaka University

■ 15 : 00 ~ 15 : 25

**S-03 Carcinogenesis of ovarian clear cell carcinoma through toxic metabolism**

○ Masashi Takano

Department of Obstetrics and Gynecology, National Defense Medical College

Discussion : 15 : 25 ~ 15 : 40

## September 27 (Sunday)

■ 10 : 20 ~ 11 : 55 “The 10th JSIT Award” and “The 10th JSIT prize for encouragement” lectures

Chairperson: Reiko Tejima (Okayama University of Science)

■ 10 : 20 ~ 10 : 55

JSIT Award Lecture

**AL-01 Investigation of Novel *In Vitro* Evaluation Methods for Prediction of *In Vitro* Immunotoxicity**

○ Tomoaki Inoue

Former-Chugai Pharmaceutical Co., Ltd.

■ 11 : 00 ~ 11 : 25

JSIT Young Investigator Award Lecture

**AL-02 Investigation of idiosyncratic drug toxicity using HLA transgenic mice**

○ Shigeki Aoki

Laboratory of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University

■ 11 : 30 ~ 11 : 55

**AL-03 Immune dysfunction derived from zinc deficiency exacerbates the Th2 cell - M2 macrophage pathway**

○ Takamasa Kido

Department of Public Health and Environmental Medicine, The Jikei University School of Medicine

■ 13 : 10 ~ 15 : 25 Workshop “Development of the latest technology for immunotoxicity evaluation”

Chairperson : Seiji Kushima, Takao Ashikaga

■ 13 : 10 ~ 13 : 35

WS-01 Single-cell imaging of inflammatory regulated cell death

○ Yoshitaka Shirasaki

Graduate school of Pharmaceutical Sciences, the University of Tokyo

■ 13 : 40 ~ 14 : 05

WS-02 Application of LCI-S to immunotoxicity study

○ Etsushi Kuroda

Department of Immunology, Hyogo College of Medicine

■ 14 : 05 ~ 14 : 30

WS-03 Mammalian synthetic biology using tissue engineering and micro-fluidic technology

○ Yoh-ichi Tagawa<sup>1</sup> and Yoichi Fujiyama<sup>2</sup>

<sup>1</sup> School of Life Science and Technology, Tokyo Institute of Technology,

<sup>2</sup> Bio-Industry Unit Technology Research Laboratory, Shimazu cooperation

■ 14 : 35 ~ 15 : 00

WS-04 Non-clinical *in vitro* research on human immune physiology in drug development

○ Chiyomi Kubo<sup>1</sup>, Tomoaki Inoue<sup>2</sup>

<sup>1</sup> Research Division, Chugai Pharmaceutical Co., Ltd.,

<sup>2</sup> Former- Research Division, Chugai Pharmaceutical Co., Ltd.

Discussion : 15 : 00 ~ 15 : 25

■ 15 : 30 Closing remarks

**【Poster display 16 abstracts to be viewed on the web from September 23rd to 27th】**

P-01 Impact of dietary exposure to tris(1,3-dichloro-2-propyl)phosphate in allergic asthmatic mice.

○ Rie Yanagisawa<sup>1</sup>, Eiko Koike<sup>1</sup>, Tin-Tin Win-Shwe<sup>1</sup>, Maiko Kawaguchi<sup>2</sup>, Tsutomu Shimada<sup>3</sup>, Hirohisa Takano<sup>4</sup>

<sup>1</sup> National Institute for Environmental Studies, <sup>2</sup> Meiji University, <sup>3</sup> Kanazawa University Hospital,

<sup>4</sup> Kyoto University

P-02 Effects of oral exposure to tris(1,3-dichloro-2-propyl) phosphate on immune cells in a mouse model of allergic asthma.

○ Eiko Koike<sup>1</sup>, Rie Yanagisawa<sup>1</sup>, Tin Tin Win Shwe<sup>1</sup>, Hirohisa Takano<sup>2</sup>

<sup>1</sup> National Institute for Environmental Studies, <sup>2</sup> Kyoto University

- P-03 Dietary exposure to tris(1,3-dichloro-2-propyl) phosphate affects central nervous system in allergic asthmatic mice**  
 ○ Tin-Tin Win-Shwe<sup>1</sup>, Rie Yanagisawa<sup>1</sup>, Eiko Koike<sup>1</sup>, Hirohisa Takano<sup>2</sup>  
<sup>1</sup> National Institute for Environmental Studies, <sup>2</sup> Kyoto University
- P-04 Di-(2-ethylhexyl) phthalate enhances release of cytokine from ILC2 in the presence of IL-33**  
 ○ Megumi Nagao<sup>1</sup>, Akiko Honda<sup>1,2</sup>, Michitaka Tanaka<sup>1</sup>, Hirohisa Takano<sup>1,2</sup>  
<sup>1</sup> Graduate School of Global Environmental Studies, Kyoto University,  
<sup>2</sup> Graduate School of Engineering, Kyoto University
- P-05 2-Hydroxyethyl methacrylate induces IL-1  $\alpha$  production by murine keratinocytes.**  
 ○ Toshinobu Kuroishi<sup>1</sup>, Takahiro Kaji<sup>1</sup>, Kanan Bando<sup>1,2</sup>, Shunji Sugawara<sup>2</sup>  
<sup>1</sup> Division of Oral Immunology,  
<sup>2</sup> Division of Orthodontics and Dentofacial Orthopedics, Tohoku University Graduate School of Dentistry
- P-06 Role of costimulatory molecules in function of CD8<sup>+</sup> lymphocytes exposed to asbestos during MLR**  
 ○ Naoko Kumagai-Takei, Yasumitsu Nishimura, Suni Lee, Kei Yoshitome, Tatsuo Ito, Takemi Otsuki  
 Department of Hygiene, Kawasaki Medical School
- P-07 Functional analysis of MMP-7 in human T cell lines continuously exposed to asbestos fibers.**  
 ○ Suni Lee, Shoko Yamamoto, Tamayo Hatayama, Tatsuo Ito, Naoko Kumagai-Takei, Kei Yoshitome, Yasumitsu Nishimura, Takemi Otsuki  
 Department of Hygiene, Kawasaki Medical School
- P-08 Activation of aryl hydrocarbon receptor by oral administration of benzo(a)pyrene exacerbates the food allergic reaction in a mouse model of OVA-induced food allergy.**  
 ○ Hitoshi Tajima<sup>1</sup>, Risako Tajiki-Nishino<sup>1</sup>, Yuko Watanabe<sup>1</sup>, Tomoki Fukuyama<sup>1,2</sup>  
<sup>1</sup> Institute of Environmental Toxicology,  
<sup>2</sup> Azabu University Faculty of Veterinary Medicine, Pharmacology Laboratory
- P-09 Estimation and Assessment of Personal Care Products Affecting Atopic Dermatitis**  
 ○ Saori Tan<sup>1</sup>, Akiko Honda<sup>1,2</sup>, Natsuko Miyasaka<sup>2</sup>, Michitaka Tanaka<sup>2</sup>, Shin Tamura<sup>1</sup>, Hitoshi Okano<sup>1</sup>, Zaoshi Wang<sup>1</sup>, Megumi Nagao<sup>2</sup>, Li Yinpeng<sup>1</sup>, Yuki Kan<sup>2</sup>, Kayo Ueda<sup>1,2</sup>, Hirohisa Takano<sup>1,2</sup>  
<sup>1</sup> Graduate School of Engineering, Kyoto University,  
<sup>2</sup> Graduate School of Global Environmental Studies, Kyoto University
- P-10 The different effect of administration of traditional Japanese medicines alone or in combination on busulfan-induced aspermatogenesis.**  
 ○ Ning Qu<sup>1</sup>, Masahiro Itoh<sup>2</sup>, Kaori Suyama<sup>1</sup>, Shogo Hayashi<sup>1</sup>, Kou Sakabe<sup>1</sup>  
<sup>1</sup> Department of Anatomy, Division of Basic Medical Science, Tokai University School of Medicine, Kanagawa, Japan.  
<sup>2</sup> Department of Anatomy, Tokyo Medical University

- P-11 Evaluation of cytotoxicity and efficacy of adjuvant-containing nasal vaccine using genetic markers**  
○ Eita Sasaki<sup>1</sup>, Hideki Asanuma<sup>2</sup>, Haruka Momose<sup>1</sup>, Keiko Furuhata<sup>1</sup>, Takuo Mizukami<sup>1</sup>, Isao Hamaguchi<sup>1</sup>  
<sup>1</sup>Department of Safety Research on Blood and Biological Products, National Institute of Infectious Diseases, Japan,  
<sup>2</sup>Influenza Virus Research Center, National Institute of Infectious Diseases, Japan
- P-12 Evaluation of cytotoxicity and efficacy of adjuvant-containing nasal vaccine using genetic markers**  
○ Eita Sasaki<sup>1</sup>, Hideki Asanuma<sup>2</sup>, Haruka Momose<sup>1</sup>, Keiko Furuhata<sup>1</sup>, Takuo Mizukami<sup>1</sup>, Isao Hamaguchi<sup>1</sup>  
<sup>1</sup>Department of Safety Research on Blood and Biological Products, National Institute of Infectious Diseases, Japan,  
<sup>2</sup>Influenza Virus Research Center, National Institute of Infectious Diseases, Japan
- P-13 The roles of unfold protein responses in cholera toxin B-induced interleukine-1  $\beta$  production**  
○ Izumi Sasaki<sup>1</sup>, Takashi Orimo<sup>1</sup>, Isui Harie<sup>1</sup>, Yuko Takisawa<sup>1</sup>, Ko-ichi Furukawa<sup>2</sup>, Tsuneyasu Kaisho<sup>1</sup>  
<sup>1</sup>Department of Immunology, Institute of Advanced Medicine, Wakayama Medical University  
<sup>2</sup>Department of Immunology, Lifelong Sports and Health Sciences, Chubu University College of Life and Health Sciences
- P-14 Mechanisms underlying SARS-CoV-2 spike protein-induced pro-inflammatory responses in murine macrophages**  
○ Ken Shirato, Takako Kizaki  
Department of Molecular Predictive Medicine and Sport Science, Kyorin University School of Medicine
- P-15 Roles of the endothelial cell-specific protein Robo4 in inflammation**  
Keisuke Shirakura<sup>1</sup>, William Aird<sup>2</sup>, Takefumi Doi<sup>1</sup>, ○ Yoshiaki Okada<sup>1</sup>  
<sup>1</sup>Graduate School of Pharmaceutical Sciences, Osaka University, <sup>2</sup>Harvard Medical School
- P-16 Detecting immunotoxicity *in vitro*-Clinically relevant studies in the COVID 19 era**  
Shaheda S. Ahmed, Anne M. Dickinson  
Alcyomics Ltd., Newcastle upon Tyne