

## Annual Meeting

## The 20th Annual Meeting of JSIT

20th Memorial Symposium		
Immunotoxicology: Current Situations and Future perspective.	○Jun-ichi Sawada	Pharmaceuticals and Medical Devices Agency, Tokyo, Japan
Molecular and cellular bases for chronic inflammation-associated organ fibrosis	○Kouji Matsushima	The Department of Molecular Preventive Medicine, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan
Clinical Evaluation of Immunotoxicity: Past and Current Strategies	○Jacques DESCOTES	Eurotox Register Toxicologist Prof. and Head, Poison Center and Pharmacovigilance Department, Lyon University Hospitals, Lyon, France
Addressing Uncertainty in Immunotoxicology: Evaluating Risk for Immunomodulatory Comounds	○Laine Peyton Myers	US Food and Drug Administration, Silver Spring, MD, USA
Master's Lecture 1		
Mechanisms of Immunotoxicity of PAHs and Arsenic Given Alone or in Combination to Murine Spleen Cells and Human Peripheral Blood Mononuclear Cells (HPBMC)	○Scott W. Burchiel	Professor & DeSantis Chair of Pharmacogenomics, Department of Pharmaceutical Sciences, Senior Associate Dean, UNM HSC College of Pharmacy, Albuquerque, NM, USA
Master's Lecture 2		
Delta-like 4 is indispensable in thymic environment specific for T cell development.	○Katsuto Hozumi	Department of Immunology, Tokai University School of Medicine, Japan
Awards Lectures <The JSIT Award>		
How to assess exposure and health effects among the most vulnerable population, fetus and children	○Kayama, Fujio	Jichi Medical University, Tochigi, Japan
Awards Lectures <The JSIT Research Award>		
Immunotoxicity of nanomaterials: aiming to establish sustainable nanotechnology	○Yasuo Yoshioka, Yasuo Tsutsumi	Laboratory of Toxicology and Safety Science, Graduate School of Pharmaceutical Sciences, Osaka University, Suite, Japan
Workshop		

Validation status of KeratinoSens assay in JaCVAM Peer review panel on sensitization test	○Yukiko Kanazawa (1), Reiko Adachi (2), Kohichi Kojima (3), Naohisa Tsutsui (4), Kazuhiro Sato (5), Takashi Morimoto (6), Masahiro Takeyoshi (7), Eiji Maki (8), Hajime Kojima (2)	(1) PMDA, (2)NIHS, (3) FDSC, (4)Mitsubishi Tanabe Pharma Corporation, (5)Fukui University, (6)Sumitomo Chemical, (7) CERI, (8) Consultant on Drug Safety Assessment, Japan
Validation status of Direct Peptide Reactivity Assay (DPRA) in JaCVAM Peer review panel on sensitization test	○Masahiro Takeyoshi (1), Kazuhiro Sato (2), Takashi Morimoto (3), Naohisa Tsutsui (4), Reiko Adachi (5), Yukiko Kanazawa (6), Kohichi Kojima (7), Eiji Maki (8), Hajime Kojima (5)	(1) CERI, (2) Fukui University, (3) Sumitomo Chemical, (4) Mitsubishi Tanabe Pharma Corporation, (5)NIHS, (6)PMDA, (7) FDSC, (8) Consultant on Drug Safety Assessment, Japan
An example of immunotoxicological assessment for investigational new drugs; the immunotoxicity studies for fingolimod, a novel drug for the treatment of multiple sclerosis	○Naohisa Tsutsui	Mitsubishi Tanabe Pharma Corporation, Japan
Oral Presentations		
The changes of the immune circumstance in the testicular tissues of mice treated with low doses of di-(2-ethylhexyl) phthalate	○Hayato Terayama (1), Miyuki Kuramasu (2), Shuichi Hirai (2), Munekazu Naito (2), Ning Qu (2), Kaori Suyama (1), Masahiro Itoh (2), Kou Sakabe (1)	(1) Department of Human Structure and Function, School of Medicine, Tokai University, Kanagawa, Japan; (2) Department of Anatomy, Tokyo Medical University, Tokyo, Japan
Effects of interleukin-6 on the transport of manganese in neuronal cells	Hitomi Fujishiro, Mari Yoshida, ○Seiichiro Himeno	Tokushima Bunri University. Tokushima, Japan
Effects of isoflavones on IL-17 gene expression via STAT3 and ROR $\gamma$	○Hiroyuki Kojima (1), Ryuta Muromoto (2), Miki Takahashi (2), Shinji Takeuchi (1), Tadashi Matsuda (2)	1Hokkaido Institute of Public Health, 2Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, Japan
Alteration of cytoskeleton molecules such as $\beta$ -actin in human T cell line exposed continuously to chrysotile (white asbestos)	○Takemi Otsuki <sup>1</sup> , Megumi Maeda <sup>2</sup> , Hidenori Mastuzaki <sup>1</sup> , Suni Lee <sup>1</sup> , Naoko KUmagai-Takei <sup>1</sup> , Yasumitsu Nishimura <sup>1</sup>	(1)Department of Hygiene, Kawasaki Medical School, Kurashiki, Japan; (2) Laboratory of Functional Glycobiology, Department of Biofunctional Chemistry, Division of Agricultural and Life Science, Graduate School of Environmental and Life Science, Okayama University, Okayama, Japan

Analysis of particulate-induced pulmonary allergic inflammation	○Etsushi Kuroda (1), Yasuo Morimoto (2)	(1) WPI Immunology Frontier Research Center, Osaka University, Suit, Japan; (2) Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Kitakyushu, Japan
Study of blood DcR3 concentration and its correlation to autoimmune disease parameters in silicosis patients.	○Suni Lee, Yasumitsu Nishimura, Shoko Yamamoto, Tamayo Hatayama, Hidenori Matsuzaki, Naoko Kumagai-Takei, Takemi Otsuki	Kawasaki Medical School, Dept. Hygiene, Kurashiki, Japan
Cadmium exposure increases the susceptibility to testicular autoimmunity in mice	○Yuki Ogawa, Miyuki Kuramasu, Ning Qu, Shuichi Hirai, Shogo Hayashi, Naoyuki Hatayama, Munekazu Naito, Masahiro Itoh	Department of Anatomy, Tokyo Medical University, Tokyo, Japan
Age, smoking, and radiation effects on the production of reactive oxygen species in blood cells of atomic-bomb survivors	○Tomonori Hayashi (1), Yiqun Hu (1), Kyoji Furukawa (2), Waka Ohishi (3), Ikue Hayashi (4), Kengo Yoshida (1), Junko Kajimura (1), Seishi Kyoizumi (1), Yoichiro Kusunoki (1), Kei Nakachi (1)	Departments of (1) Radiobiology/Molecular Epidemiology, (2) Statistics, and (3) Clinical Studies, Radiation Effects Research Foundation; (4) Hiroshima University Faculty of Dentistry, Hiroshima, Japan
Forming agglomerate with antigen make silica nanoparticle immunotoxic.	○Toshiro Hirai (1), Yasuo Yoshioka (1), Hideki Takahashi (1), Ko-ichi Ichihashi (1), Nobuo Nishijima (1), Tokuyuki Yoshida (1), Shin-ichi Tsunoda (2), (3), Kazuma Higashisaka (1), Yasuo Tsutsumi (1), (2), (3)	(1) Grad. Sch. Pharm. Sci., Osaka Univ.; (2) NIBIO; Ibaragi, Japan; (3) MEIC, Osaka Univ., Suita, Japan
Immunological and histopathological analysis of BALB/c mice transcutaneously sensitized with acid-hydrolyzed wheat protein	○Young-Man Cho (1), Reiko Adachi (2), Shinobu Sakai (2), Yoshie Kimura (2), Rika Nakamura (2), Yuma Fukutomi (3), Reiko Teshima (2), Kumiko Ogawa (1)	(1) Div. Path., Natl. Inst. Health Sci., Tokyo, Japan; (2) Div. Novel Foods Immunochem., Natl. Inst. Health Sci., Tokyo, Japan; (3) Clin. Res. Ctr. Allergy Rheumatol., Sagamihara Natl. Hosp., Kanagawa, Japan
Impact of topical corticosteroids potency on scratching behavior of steroid-induced pruritus in mice	○Katsunori Yamaura, Ayaka Funakoshi, Nobuo Oishi, Ayana Tomono, Ryosuke Doi, Koichi Ueno	Department of Geriatric Pharmacology and Therapeutics, Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, Japan

Application of h-CLAT as a prediction test of drug-induced allergy	○Maho Ukaji (1), Ryosuke Nakamura (1), Yoshiro Saito (1), Mitsuhiro Uchida (2), Toshiyuki Tsuchiya (2), Kouichi Kurose (1), (3)	(1) Div. Med. Safety Sci., Natl. Inst. Health Sci.; (2) Phar. Res. Ctr., Meiji Seika Pharma, Co. Ltd.; (3) Dpt. Food Sci. Tech., Tokyo Univ. Marine Sci., Tokyo, Japan
Sensitization study by a new qualitative structure-toxicity relationships (QSTR) approach: K-step Yard sampling (KY) methods	○Kazuhiro Sato (1), Yukinori Kusaka (1), Kohtaro Yuta (2)	(1) Department of Environmental Health, School of Medicine, University of Fukui, Fukui, Japan, (2) In Silico Data Ltd., Narashino, Japan
Development the identifying method for chemical-induced respiratory allergy	○Risako Nishino, Tomoki Fukuyama, Yuko Watanabe, Yoshimi Kurosawa, Hideo Ueda, Tadashi Kosaka	Institute of Environmental Toxicology, Ibaraki, Japan
Effects of combined exposure to environmental immunotoxicological chemicals	○Tomoki Fukuyama, Risako Nishino, Tadashi Kosaka, Yuko Watanabe, Yoshimi Kurosawa, Koichi Hayashi, Hideo Ueda, and Takanori Harada	Institute of Environmental Toxicology, Ibaraki, Japan
Acid-hydrolyzed wheat protein-specific serum IgE cross-reacts to transglutaminase-treated wheat gluten	○Ryosuke Nakamura (1), Rika Nakamura (1), Shinobu Sakai (1), Reiko Adachi (1), Yoshiro Saito (1), Atsuo Urisu (2), Yuma Fukutomi (3), Reiko Teshima (1)	(1) Natl. Inst. Health Sci., Tokyo, Japan; (2) 2nd Teaching Hosp., Fujita Health Univ., Nagoya, Japan; (3) Clin. Res. Ctr., Sagamihara Hosp., Sagamihara, Japan
Streamer discharge reduces cedar pollen-induced pro-inflammatory responses in human airway epithelial cells.	○Akiko Honda (1), Nobuyuki Shirasawa (2), Satoshi Ozawa (3), Yoshio Okamoto (4), Hirohisa Takano (1)	(1) Environmental Health Division, Department of Environmental Engineering, Graduate School of Engineering, Kyoto University, Kyoto, Japan; (2) Department of Anatomy and Structural Science, Yamagata University Graduate School of Medical Science, Yamagata, Japan; (3) Technology and Innovation Center Preparation Office, (4) Air Conditioning Manufacturing Division Product Development Group, Daikin Industries, LTD. Osaka, Japan
Role of transcription factor FoxO1 in regulation of apoptosis induced by asbestos.	○Hidenori Mastuzaki (1), Suni Lee (1), Megumi Maeda (2), Naoko Kumagai-Takei (1), Yasumitsu	(1) Department of Hygiene, Kawasaki Medical School, Kurashiki, Japan; (2) Laboratory of Functional Glycobiology, Kurashiki University of Science and Art, Kurashiki, Japan

	Nishimura (1), Takemi Otsuki (1)	Department of Biofunctional Chemistry, Division of Agricultural and Life Science, Graduate School of Environmental and Life Science, Okayama University, Okayama, Japan
Toxicity characteristics of titanate nanosheets for peripheral blood mononuclear cells	○Yasumitsu Nishimura (1), Daisuke Yoshioka (2), Suni Lee (1), Naoko Kumagai-Takei (1), Hidenori Matsuzaki (1), Takemi Otsuki (1)	(1) Dept of Hygiene and (2) Dept of natural sciences, Kawasaki Medical School, Kurashiki, Japan
Effect of IL-2 addition on the suppressed induction of CTL upon exposure to asbestos	○Naoko Kumagai-Takei, Yasumitsu Nishimura, Hidenori Matsuzaki, Suni Lee, Takemi Otsuki	Department of Hygiene, Kawasaki Medical School, Kurashiki, Japan
Reversible changes of neurological and inflammatory biomarkers in the mouse hippocampus after early life exposure to intermediate frequency magnetic fields	○Tin Tin Win Shwe (1), Shin Ohtani (2), Akira Ushiyama (2), Hiroshi Nitta (1), Naoki Kunugita (2)	(1) National Institute for Environmental Studies, Tsukuba, Ibaraki, Japan; (2) National Institute of Public Health, Wako City, Saitama, Japan
Mechanisms of the effects of brominated flame retardants on bronchial epithelial cells	○Eiko Koike (1), Rie Yanagisawa (1), Hirohisa Takano (2)	(1) National Institute for Environmental Studies, Tsukuba, Japan; (2) Kyoto University, Kyoto, Japan
Associations between HLA alleles and severe cutaneous adverse reactions induced by 3 anti-epileptic drugs in Japanese patients.	Emiko Sugiyama (1), (2), Nahoko Kaniwa (1),(2), Yukitoshi Takahashi (2), Hirokazu Furuya (2), Masaaki Muramatsu (2), Shigeru Kinoshita (2), Taisei Mushiroda (3), Michiaki Kubo (3), Keiko Maekawa (1),(2), Ryosuke Nakamura (1), (2), Akiko Yagami (2), Chie Sotozono (2), Mayumi Ueta (2), Hiroko Ikeda (2), Zenro Ikezawa (2), JPDSC (4), Kayoko Matsunaga (2), Michiko Aihara (2), ○Yoshiro Saito (1),(2)	(1) Natl. Inst. Health Sci., Tokyo, Japan; (2) JSAR research group, Japan; (3) Riken, 4Japan; (4) JPDSC (the Japan Pharmacogenomics Data Science Consortium), Japan
The effect of aspirin on IgE-dependent basophil activation	○Masae Horii (1), Yuma Fukutomi (2), Tomoko Toma (3), Tomomi Higashi (4), Masami Kitaoka (1), Junko Mitoma (1), Hiroki Asakura (1),	(1) Department of Environmental and Preventive Medicine, Kanazawa University, Kanazawa, Japan; (2) Sagamihara National Hospital, Sagamihara, Japan; (3) Department of Pediatrics,

	Yasuhiro Kambayashi (1), Yoshiaki Hitomi (1), Akihiro Yachie (3), Hiroyuki Nakamura (1)	Kanazawa Univ., 4Department of Hygiene, Kanazawa Univ., Kanazawa< Japan
Students and Young Scientists Session		
Size-independent immunotoxicity induced by amorphous silica particles	○Nobuo Nishijima (1), Yasuo Yoshioka (1), Toshiro Hireai (1), Hideki Takahashi (1) Ko-ichi Ichihashi (1), Shin-ichi Tsunoda (2), (3), Kazuma Higashisaki (1), Yasuo Tsutsumi (1),(2),(3)	(1) Grad. Sch. Pharm. Sci., Osaka Univ., Suita, Japan; (2), NIBIO, Ibaragi, Japan; (3) MEIC, Osaka Univ., Suita, Japan
The effect of busulfan on the immune system and spermatogenesis in immune-competent mice	○Yoshie Hirayanagi, Ning Qu, Shuichi Hirai, Munekazu Naito, Miyuki Kuramasu, Shogo Hayashi, Naoyuki Hatayama and Masahiro Itoh	Department of Anatomy, Tokyo Medical University, Tokyo, Japan
The inflammatory relative mRNA expressions of Chemokine in splenic macrophages from rats exposed to MWCNT by whole-body inhalation for 13 weeks	○Takamasa Kido (1), (2), Masashi Tsunoda (2), Tatsuya Kasai (3),Toshiaki Sasaki (3), Yumi Umeda (3), Hideki Senoh (3), Hiroyuki Yanagisawa (1), Masumi Asakura (3), Yoshiharu Aizawa (4), Shoji Fukushima (3)	(1) Department of Public Health and Environmental Medicine, The Jikei University School of Medicine, Tokyo, Japan; (2) Department of Preventive Medicine, Kitasato University School of Medicine, Sagamihara, Japan; (3)Japan Bioassay Research Center, Japan Industrial Safety and Health, Tokyo, Japan; (4) The Kitasato, Insitute, Tokyo, Japan
Luncheon Seminar		
Immune Endpoints and their Relevance to Preclinical Toxicology	○Christina M. Satterwhite	Director, Laboratory Sciences, Charles River Laboratories, Preclinical Services, Nevada, USA
Advances in the prediction of cytokine release syndrome	○K Harper	Huntingdon Life Sciences, Huntingdon, UK