

November 16 (Tue)

9:00 1st Floor at the entrance of Multi Purpose Hall

Registration

9:20 – 9:25 Main Convention Hall

Opening Remarks

Yasunobu Aoki
President of the 39th JEMS Meeting; Research Center for Risk Assessment, National Institute for Environmental Studies

9:25 – 10:35 Main Convention Hall

Oral Presentation

Chairpersons: Yukari Totsuka (National Cancer Center Research Institute)
Mie Akanuma (Biomedical Research Laboratories, Kureha Corporation)

- O-1** 9:25 **Evaluation of *in vitro* micronucleus assay using human skin models**
(P-032) Katsuyuki Yuki, Hideaki Nakagiri, Naohiro Ikeda, Toshio Kasamatsu, Naohiro Nishiyama
Kao Corporation, Global R&D – Safety Science
- O-2** 9:35 **Development of a prediction system for CYP1A2-mediated mutagenic activation/inactivation of chemicals**
(P-025) Yoshiya Yamamura, Kazumi Ito, Koichi Yoshinari, Yasushi Yamazoe
Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai, Japan
- O-3** 9:45 **MicroRNA changes induced by heterocyclic amines and its significance in the early stages of colon carcinogenesis**
(P-024) Kai Imai^{1,3}, Masako Ochiai^{1,2}, Yoshitaka Hippo¹, Maki Igarashi^{1,2}, Shin Wakui³, Hitoshi Nakagama^{1,2}
¹Early Oncogenesis Res Proj, ²Biochem Div, Natl Cancer Ctr Res Inst, ³Dep Tox, Azabu Univ Sch Vet Med
- O-4** 9:55 **Proteomic analysis for arylhydrocarbon receptor (AhR) complex**
(P-074) Shun Matsuda¹, Jun Adachi², Masaru Ihara¹, Masae Ikura³, Tsuyoshi Ikura³, Tomonari Matsuda¹
¹Research Center for Environmental Quality Management, Kyoto University, ²National Institute of Biomedical Innovation, ³Radiation Biology Center, Kyoto University
- O-5** 10:05 **Influence of pseudo-sunlight irradiation to mutagenicity of the aqueous solution of chemical substance designated as PRTR includes carbaryl**
(P-100) Akiko Yamamoto¹, Aya Inaba¹, Youhei Inaba², Naoki Kunugita², Katsumi Uchida¹, Koji Tsuchiya¹, Sumio Goto³, Hirofumi Yajima¹
¹Tokyo University of Science, ²National Institute of Public Health, ³Azabu University
- O-6** 10:15 **Mutagenic effect of long-term inhalation of diesel nano-particles in the lungs and livers of *gpt* delta mice**
(P-080) Hiroimi Sato¹, Yukari Sakashita¹, Ken-ichi Masumura², Akiko Furuyama¹, Seishiro Hirano¹, Takehiko Nohmi², Yasunobu Aoki¹
¹Natl. Inst. Environ. Studies (NIES), ²Natl. Inst. Health Sci.
- O-7** 10:25 **Development of nanotoxicity evaluation method focusing on p21-GFP using flow cytometer**
(P-084) Yousuke Toduka¹, Tatsushi Toyooka¹, Manabu Koike², Yuko Ibuki¹
¹Inst. Environ. Sci., Univ. of Shizuoka, ²Natl. Inst. Radiol. Sci.

10:45 – 11:30 Main Convention Hall

Plenary Lecture

Chairperson: Yasunobu Aoki (Research Center for Environmental Risk, National Institute for Environmental Studies)

- PL** 10:45 **Expectation and outline of Japan Environment and Children's Study focusing on environmental chemicals and child health**
Hiroshi Satoh
Graduate School of Medicine, Tohoku University; National Core Center at NIES

12:30 – 13:30 Main Convention Hall

General Meeting

13:30 – 14:20 Main Convention Hall

Award Lectures

Chairperson: Yasushi Yamazoe (Graduate School of Pharmaceutical Sciences, Tohoku University; President of JEMS)

JEMS Award 2010

- AW** 13:30 **Organ-specific short-term assays for environmental mutagens and carcinogens**
Chie Furihata
Division of Cellular and Gene Therapy Products, National Institute of Health Sciences

JEMS Award 2010

- AA** 14:00 **Mechanism analysis of mutations induced by DNA crosslinking agents, using gpt delta mice and a cell line derived from the mice**
Akira Takeiri
Fuji Gotemba Research Labs., Chugai Pharmaceutical Co., Ltd.

14:25 – 16:30 Main Convention Hall

International Symposium:

“Global issues on mutagens in the environment and their health effects”

Chairpersons: Yasunobu Aoki (Research Center for Environmental Risk, National Institute for Environmental Studies)
Masamitsu Honma (Division of Genetics and Mutagenesis, National Institute of Health Sciences)

- 14:25 **Introduction**
- IS-1** 14:30 **Challenges in addressing issues on workplace and environmental health**
Beerappa Ravichandran
Regional Occupational Health Centre (S), National Institute of Occupational Health, India
- IS-2** 15:00 **Current issues on electronic trash mutagens in Korea: molecular and toxicogenomic approach on the mutagenicity of heavy metal cadmium and nickel**
Young R. Seo
Department of Life Science, Dongguk University-Seoul, Republic of Korea
- IS-3** 15:30 **Comparison of atmospheric polycyclic aromatic compounds in China and Japan**
Ning Tang, Takayuki Kameda, Akira Toriba and Kazuichi Hayakawa
Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University, Japan

IS-4 16:00

The genotoxic hazards and carcinogenic risks of PAH contaminated soils

Paul A. White¹, Christine L. Lemieux¹, Alexandra Long¹, Staffan Lundstedt², Iain B. Lambert³, Steven D. Siciliano⁴, James Doyle⁵, Jules Blais⁵

¹Mechanistic Studies Division, Research and Radiation Directorate, Health Canada, Canada; ²Department of Chemistry, Umeå University, Sweden; ³Department of Biology, Carleton University, Canada; ⁴Department of Soil Science, University of Saskatchewan, Canada; ⁵Department of Biology, University of Ottawa, Canada

16:40 – 18:20 1st floor Multi Purpose Hall

Poster Presentation Core Time (Odd number 16:40 – 17:30 Even number: 17:30 – 18:20)

18:30 – 20:30 1st floor Room 101-102

Banquet

November 17 (Wed)

9:40 – 11:30 Mail Convention Hall

Symposium 1

“From DNA mutation to RNA - aberrant RNA and quality control of RNA”

Chairpersons: Masanobu Kawanishi (Frontier Science Innovation Center, Osaka Prefecture University)
Shizuyo Sutou (School of Pharmacy, Shujitsu University)

- S1-1** 9:40 **From DNA mutation to RNA – aberrant RNA and quality control of RNA –**
Masanobu Kawanishi
Frontier Science Innovation Center, Osaka Prefecture University
- S1-2** 9:50 **Molecular mechanism of transcriptional mutagenesis induced by DNA lesions**
Isao Kuraoka
Graduate School of Engineering Science, Osaka University.
- S1-3** 10:15 **A role for ubiquitin in the clearance of nonfunctional ribosomal RNAs**
Makoto Kitabatake^{1,2}, Kotaro Fujii¹, Tomoko Sakata¹, Tokie Sakai¹, Mutsuhito Ohno¹
¹Institute for Virus Research, Kyoto University; ²JST PRESTO
- S1-4** 10:40 **mRNA surveillance: Quality control of mRNA**
Akio Yamashita
School of Medicine, Advanced Medical Research Center, Yokohama City University; JST PRESTO
- S1-5** 11:05 **Mechanisms for template-independent RNA polymerization**
Kozo Tomita
Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology; JST PRESTO

11:50 – 12:30 Main Convention Hall

Lunch Time Seminar

Organizer: Minako Nagao (Faculty of Pharmaceutical Sciences, Keio University)

- SM** 11:50 **The Thomson Reuters Journal Selection Process**
Satoko Ando
Custom Data Specialist, Thomson Reuters

12:40 – 14:20 Main Convention Hall

Symposium 2

“New technologies and new materials for environmental mutagen research”

Chairpersons: Tomonari Matsuda (Research Center for Environmental Quality Management, Kyoto University)
Takeji Takamura-Enya (Department of Applied Chemistry, Kanagawa Institute of Technology)

- S2-2** 12:40 **LC/MS/MS and next generation DNA sequencer in genotoxicity studies .**
Tomonari Matsuda
Research Center for Environmental Quality Management, Kyoto University
- S2-2** 13:05 **Development of new synthetic procedures for preparing DNA adducts**
Takeji Takamura-Enya
Department of Applied Chemistry, Kanagawa Institute of Technology

S2-3 13:30 **The role of chromatin dynamics in DNA damage-induced checkpoint activation**
Tsuyoshi Ikura
Radiation Biology Center, Kyoto University

S2-4 13:55 **Advances in iPS cell research and application**
Masato Nakagawa
Center for iPS cell Research and Application, Kyoto University

14:30 – 15:30 Main Convention Hall

Invitation Lecture

Chairperson: Toshihiro Ohta (School of Life Sciences, Tokyo University of Pharmacy and Life Sciences)

IV-1 14:30 **The background and summary of the amendment of Chemical Substances Control Law**
Tokuya Wada
Chemicals Evaluation Office, Environmental Health Department, the Ministry of the Environment

Chairperson: Takehiko Nohmi (Division of Genetics and Mutagenesis, National Institute of Health Sciences)

IV-2 15:00 **Recent trends in chemical safety management**
Masaru Kitano
Graduate School of Science and Technology, Meiji University

15:40 – 17:40 Main Convention Hall

Workshop “Risk assessment of genotoxic carcinogens and threshold”

Sponsor: National Institute for Environmental Studies

Chairpersons: Atsushi Hakura (Global Drug Safety, Eisai Co., Ltd)
Daisuke Nakajima (Research Center for Environmental Risk, National Institute for Environmental Studies)

WS-1 15:40 **Risk assessment of genotoxic carcinogens and threshold – An introduction –**
Atsushi Hakura
Global Drug Safety, Eisai Co., Ltd

WS-2 16:10 **The concept of threshold for genotoxic carcinogen applicable to the safety evaluation**
Katsushi Suzuki
Professor Emeritus, Nippon Veterinary and Life Science University

WS-3 16:40 **Risk assessment and management of genotoxic impurities in pharmaceuticals**
Masamitsu Honma
Division of Genetics and Mutagenesis, National Institute of Health Sciences

WS-4 16:55 **An example of risk assessment for hazardous air pollutants**
Michi Matsumoto
Research Center for Environmental Risk, National Institute for Environmental Studies

17:10 **Discussion**

17:40 – 17:50 Main Convention Hall

Closing Remarks

Poster Presentation

Poster View Time: November 16 (Tue), 12:00 – November 17 (Wed), 15:30

Poster Presentation: November 16 (Tue), 16:40 – 18:20

Core Time Odd number November 16 (Tue), 16:40 – 17:30

Even number November 16 (Tue), 17:30 – 18:20

- P-001** **Cross-linking activity of four-carbon compound with α -bromocarbonyl groups**
Keiichi Kaneko, Yusuke Sakuma, Keiko Inami, Masataka Mochizuki
Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-002** **Effects of nitrogen atoms on DNA crosslinking activity in tricyclic aromatics containing two bromomethyl groups**
Ryota Sano, Keiko Inami, Masataka Mochizuki
Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-003** **Application of the DNA adductome approach to assess the DNA-damaging capability of *in vitro* micronucleus test-positive compounds (2nd report)**
Kyoko Kato¹, Eiji Yamamura¹, Masanobu Kawanishi², Takashi Yagi², Tomonari Matsuda³, Akio Sugiyama¹, Yoshifumu Uno¹
¹Mitsubishi Tanabe Pharma Corporation, ²Osaka Prefecture University, ³Kyoto University
- P-004** **Increased formation of oxidative damage-related DNA adducts in obese model mice**
Tatsuya Kato^{1,2}, Yukari Totsuka¹, Rina Tasato², Keiji Wakabayashi², Shuichi Masuda²
¹Cancer Prev. Basic Res. Project, Natl. Cancer Ctr. Res. Inst., ²Dept. of Food & Nutr. Sci., Grad. Sch. of Nutr. & Environ. Sci., Univ. of Shizuoka;
- P-005** **Analysis of urinary catechol estrogen-DNA adducts as a risk marker for breast cancer**
Kyoko Toiguchi¹, Noriyuki Miyoshi¹, Tatsuya Higashi², Haruo Nukaya¹, Satoru Takahashi³, Keiji Wakabayashi¹, Hiroshi Ohshima¹
¹Graduate School of Nutritional and Environmental Sciences, ²Graduate School of Pharmaceutical Sciences, University of Shizuoka, ³Graduate School of Medicine, Nagoya City University
- P-006** **Effects of catecholamines on DNA damage induced with 17 β -estradiol metabolites in breast cancer cells**
Shunsuke Yamazaki¹, Hiroyuki Sakakibara¹, Tatsushi Toyooka¹, Yuko Ibuki¹, Hitomi Takemura^{1,2}, Kayoko Shimoi^{1,3}
¹Grad. Sch. of Nutr. Environ. Sci. Univ. of Shizuoka, ²Fac. of Human Health Sci., Matsumoto Univ., ³GCOE program, Univ. of Shizuoka
- P-007** **Optimization of the biochemical preparation of DNA adduct-modified oligodeoxynucleotides**
Manabu Yasui¹, Akira Sassa^{1,2}, Nagisa Kamoshita¹, Toshihiro Ohta², Tomonari Matsuda³, Takehiko Nohmi¹, Masamitsu Honma¹
¹Div. of Genetics and Mutagenesis, Nat. Inst. of Health Sci., ²School of Life Sci., Tokyo Univ. of Pharm. and Life Sci., ³Dept. of Eng., Kyoto Univ.
- P-008** **Translesion synthesis past brominated DNA adducts by human DNA polymerases**
Akira Sassa^{1,2}, Toshihiro Ohta², Takehiko Nohmi¹, Masamitsu Honma¹, Manabu Yasui¹
¹Div. of Genetics and Mutagenesis, Nat. Inst. of Health Sci., ²School of Life Sci., Tokyo Univ. of Pharm. and Life Sci.
- P-009** **Analysis of mutations produced by translesion DNA synthesis of 3-nitrobenzanthrone DNA adducts in human cells**
Yoshihiro Fujikawa¹, Masanobu Kawanishi¹, Takeji Takamura², Takashi Yagi¹
¹Frontier Science Innovation Center and Graduate School of Science, Osaka Pref. Univ., ²Department of Applied Chemistry, Kanagawa Institute of Technology
- P-010** **Protective effect of ascorbic acid-2 glucoside against radiation-induced DNA double-strand breaks**
Mari Suzuki^{1,2}, Yuko Yoshikawa³, Toshiaki Mori⁴, Chen Ning⁵, Zinchenko Anatoly⁵, Toshio Kanbe⁶, Shizuaki Murata⁵, Tadayuki Imanaka³, Kenichi Yoshikawa^{1,2}
¹Spatio-Temporal Order Project, ICORP, JST, ²Dept. Phys., Grad. Sch. Sci., Kyoto Univ., ³Lab. Environ. Biotechnol., Res. Org. Sci. Eng., Ritsumeikan Univ., ⁴Radiat. Res. Lab., Osaka Pref. Univ., ⁵Grad. Sch. Environ. Studies, Nagoya Univ., ⁶Div. Mol. Mycol. Med., CNDC, Nagoya Univ. Grad. Sch. Med.

- P-011 Oxidatively generated DNA damage induced by AMT, a metabolite of carcinogenic amitrole**
Ayako Furukawa¹, Shinji Oikawa², Kanako Harada², Hirokazu Sugiyama², Yusuke Hiraku², Mariko Murata²,
 Atsuyoshi Shimada¹, Shosuke Kawanishi³
¹Inst. for Developmental Res., Aichi Human Service Center. ²Dept Environ. Mol. Med., Mie Univ. ³Faculty of Pharmaceutical
 Sciences, Suzuka Univ. of Medical Science.
- P-012 Effects of p53- and Rb-knockdowns on mutations induced by 8-hydroxyguanine**
Hiroyuki Kamiya¹, Tetsuya Suzuki^{1,2}, Hideyoshi Harashima¹
¹Fac. Pharm. Sci., Hokkaido Univ., ²Natl. Inst. Hlth. Sci.
- P-013 Experiment in Kibo Module: Human cultured cells exposed to space radiation exhibited an adaptive response**
Fumio Yatagai¹, Masamitsu Honma², Akiko Ukai², Katsunori Omori³, Kaoru Sugawara⁴, Naoshi Dohmae¹,
 Noriaki Ishioka^{3,5}, Toshikazu Ebisuzaki¹
¹RIKEN, ²NIHS, ³JAXA, ⁴Kobe Univ., ⁵Kagoshima Univ.
- P-014 Adaptive response induction detected by the comet assay in human lymphoblastoid cell lines**
 Megumi Nakai, Goh Shida, Chihiro Odajima, Ayumi Yamamoto, Yu F Sasaki
 Hachinohe National College of Technology
- P-015 How does comet sensitivity depend on an excision repair?**
 Chihiro Odajima¹, Megumi Nakai¹, Natsumi Murakami^{1,2}, Keiko Tomikawa², Sachiyo Hattori²,
 Jun Okabayashi², Yu F Sasaki¹
¹Hachinohe National College of Technology, ²Toyo Ink MGF. Co.
- P-016 Role of CYP1 family enzymes in the benzo[a]pyrene adduct formation**
Kazuhiro Shiizaki¹, Masanobu Kawanishi², Takashi Yagi²
¹Saitama Cancer Center, ²Osaka Prefecture University
- P-017 Role of alkyltransferase-like (ATL) protein in repair of methylated DNA lesion in *Thermus thermophilus***
Takefumi Onodera, Shin-ichi Tokishita, Toshihiro Ohta
 Tokyo University of Pharmacy and Life Sciences
- P-018 Analysis of *alkA* mutant of *Thermus thermophilus* in repair of methylated DNA**
Hiroyuki Kunitomo, Toshihiro Ohta
 Lab of Environmental Molecular Biology, Tokyo University of Pharmacy and Life Sciences
- P-019 Effects of *Saccharomyces cerevisiae* G2/M checkpoint deficiency on spontaneous and UV-induced genome instability**
Ayumi Yamamoto¹, Satoko Sawai², Kazuo Yamamoto²
¹Department of Chemical and Biological Engineering, Hachinohe National College of Technology, ²Graduate School of Life
 Sciences, Tohoku University
- P-020 Degradation of cell cycle regulator Cdc25 by environmental carcinogens**
Katsumi Yamashita¹, Sanae Uchida², Hitoshi Nakagama³
¹Div Pharm Sci, Inst Med Pharm Health Sci, ²Center for Innov, Kanazawa Univ., ³Natl Cancer Center Res Inst.
- P-021 DNA methylation by methionine sulfoxide triggered by hydroxyl radical and implications for epigenetic modifications**
Kazuaki Kawai, Yun-Shan Li, Ming-Fen Song, Hiroshi Kasai
 Dept. Environ. Oncol., Univ. Occup. Environ. Health
- P-022 Frequent inactivation of FSTL1 by promoter hypermethylation in nasopharyngeal carcinomas**
Xue Xiao^{1,2}, Xiaoying Zhou², Yingxi Mo^{1,2}, Zhe Zhang², Guangwu Huang², Ning Ma³, Kaoru Midorikawa¹,
 Yusuke Hiraku¹, Shinji Oikawa¹, Mariko Murata¹
¹Dept. Environ. Mol. Med., Mie Univ. Grad. Sch. Med., ²Dept. Otolaryngol.-Head & Neck Surgery, Guangxi Med. Univ.,
³Fac. Health Sci., Suzuka Univ. Medical Sci.
- P-023 The transgenerational effects of chemicals by epigenetics**
Tohru Shibuya, Yukiharu Horiya
 “Tox21” Study Group

- P-024** **MicroRNA changes induced by heterocyclic amines and its significance in the early stages of colon carcinogenesis**
(O-3)
Kai Imai^{1,3}, Masako Ochiai^{1,2}, Yoshitaka Hippo¹, Maki Igarashi^{1,2}, Shin Wakui³, Hitoshi Nakagama^{1,2}
¹Early Oncogenesis Res Proj, ²Biochem Div, Natl Cancer Ctr Res Inst, ³Dep Tox, Azabu Univ Sch Vet Med
- P-025** **Development of a prediction system for CYP1A2-mediated mutagenic activation/inactivation of chemicals**
(O-2)
Yoshiya Yamamura, Kazumi Ito, Koichi Yoshinari, Yasushi Yamazoe
Graduate School of Pharmaceutical Sciences, Tohoku University
- P-026** **Effects of amino acid concentration in the test substance on the specific activity in Ames test**
Nobuyoshi Fujii, Shota Yamamoto, Hiroko Yamashita
UBE Scientific Analysis Laboratory, Inc.
- P-027** **The study of the modified Ames assay for amino acid containing material (treat & wash assay)**
Kumiko Kawakami, Hajime Sui, Noriko Sakurai, Hiroko Okutomi, Ryo Ohta
Hatano Research Institute, Food and Drug Safety Center
- P-028** **Further improvement of high-throughput fluctuation Ames test (Part VI)**
Hajime Sui¹, Kumiko Kawakami¹, Noriko Sakurai¹, Hiroko Okutomi¹, Ryo Ohta¹, Masami Yamada², Takehiko Nohmi²
¹Hatano Research Institute, FDSC, ²National Institute of Health Sciences
- P-029** **Comparison of 4 treatment conditions of extended exposure in the in vitro MN assay using TK6 lymphoblastoid cells**
Kiyohiro Hashimoto, Yumi Nakajima, Shigeo Matsumura, Fumio Chatani
Development Research Center, Pharmaceutical Research Division, Takeda Pharmaceutical Company Limited
- P-030** **Evaluation of the usefulness of an in vitro micronucleus test using TK6 cells (2nd report): Specificity to “false positive” compounds**
Chinami Aruga, Katsuya Yamada, Eiji Yamamura, Shigeharu Muto, Nobuyuki Baba, Yoshifumi Uno
Safety Research Laboratories, Research Division, Mitsubishi Tanabe Pharma Corporation
- P-031** **Evaluation of in vitro micronucleus test with human lymphoblastoid TK6 cells (No.2)**
Hitoshi Saito, Akihiko Kajiwara, Hatsuyo Yasuda, Masaya Suzuki, Kazushige Hori, Katsuaki Yasunaga, Munehiro Nakagawa, Shuichi Hamada
Safety Assessment Department, Nonclinical Research Center, Mitsubishi Chemical Medience Corporation.
- P-032** **Evaluation of in vitro micronucleus assay using human skin models**
(O-1)
Katsuyuki Yuki, Hideaki Nakagiri, Naohiro Ikeda, Toshio Kasamatsu, Naohiro Nishiyama
Kao Corporation, Global R&D – Safety Science
- P-033** **An assay for genetic toxicity using transcription inhibition reaction**
Yoko Morita, Shigenori Iwai, Isao Kuraoka
Graduate School of Engineering Science, Osaka University
- P-034** **In vitro genotoxicity assay using primary hepatocytes derived from gpt delta transgenic mouse**
Katsuyoshi Horibata, Akiko Ukai, Kenichi Masumura, Takehiko Nohmi, Masamitsu Honma
Division of Genetics and Mutagenesis, National Institute of Health Sciences
- P-035** **Analysis of genomic integrity in *Thermus thermophilus* –Establishment of a mutation detection system–**
Yuki Kato¹, Keiichiro Hiratsu², Tatsuo Nunoshiba¹
¹International Christian University, ²National Defense Academy
- P-036** **Development of TetO-GFP/TetR cell system that easily detects forward mutations at specific gene locus through GFP gene expression.**
Asao Noda¹, Yuko Hirai¹, Yoshiaki Kodama¹, Nori Nakamura²
¹Dept. Genet. ²Chief Scientist, Radiation Effects Research Foundation
- P-037** **Effect of the difference of donors on the chromosome aberration test using human lymphocytes**
Izumi Ogawa, Satoshi Furukawa, Masayoshi Abe, Soichiro Hagio, Seigo Hayashi and Koji Usuda
Biological Research Laboratories, Nissan Chemical Industries, Ltd.

- P-038** **Effect of recovery time in the chromosomal aberration test using cultured mammalian cells (part 2)**
Hiroshi Seki, Toshio Sofuni, Satoshi Takami
 Safety Studies Division, BML, Inc.
- P-039** ***In vitro* mammalian cell nucleus swelling test for a very small amount of chemical**
Kenji Takeshita, Norikazu Takagi, Tamura Masanori
 UBE Scientific Analysis Laboratory, Inc.
- P-040** **Establishment of assay yeasts that express nuclear receptors and evaluation of endocrine disrupting potency of river water**
Rina Yamada¹, Kazuhiro Shiizaki², Masanobu Kawanishi¹, Takashi Yagi¹
¹Frontier Science Center and Graduate School of Science, Osaka Pref. University, ²Saitama Cancer Center
- P-041** **Establishment of yeast reporter assay systems to detect ligands of mineralocorticoid and progesterone receptors**
Kana Onishi¹, Kazuhiro Shiizaki², Masanobu Kawanishi¹, Takashi Yagi¹
¹Frontier Science Innovation Center and Graduate School of Science, Osaka Prefecture University, ²Saitama Cancer Center
- P-042** **Genetic modifications increase the sensitivity of the yeast-based reporter assay for human nuclear receptors**
Sayoko Ito-Harashima¹, Rina Yamada¹, Kazuhiro Shiizaki², Takashi Yagi¹
¹Frontier Science Innovation Center and Graduate School of Science, Osaka Prefecture University, ²Saitama Cancer Center
- P-043** **The report of international validation study (Phase I) for the Bhas 42 cell transformation assay using 96-well culture plates**
Shoko Arai¹, Kiyoshi Sasaki¹, Ayako Sakai¹, Dai Muramatsu¹, Nobuko Endou¹, Fukutaro Mizuhashi², Miho Nagai², Masumi Asakura³, Nobuhiko Tashiro⁴, Nana Ishii⁴, Masaya Suzuki², Norihiro Tanaka¹
¹Food and Drug Safety Center, ²Biosafety Research Center, Foods, Drugs and Pesticides, ³Japan Bioassay Research Center, ⁴Mitsubishi Chemical Medience Corporation
- P-044** **Detection of DNA damage caused by perfluorooctanoic acid using the paramecium comet assay**
Haruna Goto, Kosuke Kawamoto, Itaru Sato, Shuji Tsuda
 Faculty of Agriculture, Iwate University
- P-045** **Optimal conditions for performance of the comet assay using 3-dimensional human epidermal model (part 3)**
Hajime Kojima, Maki Hojyo
 National Institute of Health Sciences (NIHS)
- P-046** **Genotoxicity of amino benzoazepinoquinolinone derivative formed by the Maillard reaction**
Sae Kobayashi¹, Marina Nishizaki¹, Minoru Ozeki¹, Tetsuya Kajimoto¹, Manabu Node¹, Tomohiro Hasei¹, Yukari Totsuka², Masanobu Kawanishi³, Takashi Yagi³, Keiji Wakabayashi^{1,4}, Tetsushi Watanabe¹
¹Kyoto Pharm. Univ., ²Nat'l Cancer Res. Center Inst., ³Osaka Pref. Univ., ⁴Univ. of Shizuoka
- P-047** **In vivo Comet Assay of the hepatocarcinogen 2,6-Dinitrotoluene (2,6-DNT)**
Tadashi Imamura, Hiroshi Suzuki, Akiko Koeda, Kiyoshi Morimoto, Yoshio Wakasa, Yoshihiro Takei, Hiroshi Sato, Shinichi Sato
 Ina Research Inc.
- P-048** **Evaluation of high density ionized air (HDIA) in lung comet assays using rats and mice exposed by inhalation**
Hironao Takasawa¹, Kiyoshi Wako¹, Yukari Sato¹, Rie Takashima¹, Akiko Hattori¹, Masayoshi Kawabata¹, Minoru Tsuchitani², Yumi Wako², Naoaki Yamada², Shuichi Hamada¹
¹Safety Assess. Dept. and ²Pathology Dept., Nonclinical Research Center, Mitsubishi Chemical Medience Corporation
- P-049** **Consideration of maturation stage-dependent sensitivity of male rat germ cell to short-term mutagen exposure -2**
Akiko Hattori¹, Kazunori Narumi^{1,2}, Koji Ashizawa², Rie Takashima¹, Hironao Takasawa¹, Shuichi Hamada¹
¹Mitsubishi Chemical Medience Corporation, ²Miyazaki University
- P-050** **Evaluation of *in vivo* skin comet assay using hairless mouse**
Tomoyasu Toyozumi, Ryo Ohta, Yuzuki Nakagawa, Yoshiyuki Tazura, Satoshi Noguchi, Noriko Sakurai, Hirotaka Matsumoto, Kohji Yamakage
 Hatano Research Institute, Food and Drug Safety Center

- P-051** **A comparison of cell collecting methods for the comet assay in urinary bladder of rats**
Kunio Wada, Yuzo Takezawa, Misaki Abe, Aya Ohnuma, Sayuri Kojima, Toshinori Yoshida,
 Kyomu Matsumoto
 The Institute of Environmental Toxicology, Toxicology Division
- P-052** **In Vivo Comet Assay: Update on ongoing international validation study coordinated by JaCVAM (2nd report)**
Yoshifumi Uno¹, Hajime Kojima², JaCVAM: Comet Assay International Validation Project Team, In Vivo
¹JEMS/MMS, ²NIHS/JaCVAM
- P-053** **Comet Assay Atlas**
Jin Tanaka, Shoji Masumori, Madoka Nakajima, Makoto Hayashi
 Biosafety Research Center, Foods Drugs and Pesticides (BSRC)
- P-054** **A study of effects of method and analyzer on *in vivo* comet assay results**
Takahiro Kyoya¹, Misako Iio², Saori Nomura², Megumi Terada¹, Shuichi Masuda²
¹Life Science Research Institute, Kumiai Chemical Industry Co., Ltd., ²Grad. Sch. Nutrl. Environ. Sci., Univ. of Shizuoka
- P-055** **The *in vivo* Pig-A gene mutation assay in mice after irradiation**
Naoki Kunugita, Shin Ohtani, Akira Ushiyama
 National Institute of Public Health, Department of Environmental Health
- P-056** **Investigation of repeated dose liver micronucleus assay in rats**
Rie Takashima, Kazunori Narumi, Hironao Takasawa, Kazufumi Kawasaki, Shuichi Hamada
 Mitsubishi Chemical Medience Corporation
- P-057** **Simple flow cytometry to score micronucleated immature erythrocyte in rat bone marrow and peripheral blood.**
Asako Harada, Akira Takeiri, Kenji Tanaka, Kaori Matsuzaki, Shigeki Motoyama, Masayuki Mishima
 Chugai Pharmaceutical Co.,Ltd., Safety Assessment Department
- P-058** **A possible mechanism for the enhancement by co-exposure to static magnetic fields (SMF) of micronucleus formation by mutagens (Part 3)**
Yuji Suzuki, Masateru Ikehata, Hiroyuki Yanagisawa
 The Jikei Univ. Sch. of Med.
- P-059** **Evaluation of mutagenicity and cytotoxicity of intermediate frequency magnetic field using DNA repair deficient mammalian cells**
Sachiko Yoshie¹, Masateru Ikehata¹, Yukihisa Suzuki², Keiji Wada², Kanako Wake³, Taiji Sakai³,
 Satoshi Nakasono⁴, Masao Taki², Chiyoji Ohkubo⁵
¹RTRI, ²Tokyo Metropolitan Univ., ³NICT, ⁴CRIEPI, ⁵Japan EMF Information Center
- P-060** **Development of colon tumors by benzo[*a*]pyrene in a mouse colitis model using dextran sulfate sodium**
Atsushi Hakura¹, Yuki Momozawa¹, Jiro Sonoda², Satoru Hosokawa¹, Kazuo Tsukidate¹, Toyohiko Aoki²,
 Motohide Kobayashi², Akiyoshi Suganuma¹
¹Tsukuba, ²Kawashima, Global Drug Safety, Eisai Co., Ltd.
- P-061** **Hairless mutation: a driving force of humanization from a human-ape common ancestor by enforcing upright walking while holding a baby with both hands**
 Shizuyo Sutou
 School of Pharmacy, Shujitsu University
- P-062** **Long-term effects of a high germline mutation rate by using mutator mice modified replicative DNA polymerase delta**
Arikuni Uchimura¹, Yuko Hidaka¹, Kenichi Masumura², Takehiko Nohmi², Ikuo Miura³, Shigeharu Wakana³,
 Takeshi Yagi¹
¹Graduate School of Frontier Biosciences, Osaka University, ²Division of Genetics and Mutagenesis, National Institute of Health Sciences, ³Japan Mouse Clinic, RIKEN BRC

- P-063** **Analysis of the spontaneous mutations of DNA polymerase κ knockin *gpt* delta mice**
Kenichi Masumura¹, Naomi Toyoda-Hokaiwado¹, Masayuki Hasuko^{1,2}, Mina Muramatsu^{1,3}, Naoko Niimi⁴, Petr Grúz¹, Akira Takeiri⁵, Kohichi Jishage⁵, Masayuki Mishima⁵, Takehiko Nohmi¹
¹Division of Genetics and Mutagenesis, National Institute of Health Sciences, ²Azabu University, ³Tokyo University of Pharmacy and Life Sciences, ⁴Tokyo Metropolitan Institute for Neuroscience, ⁵Chugai Pharmaceutical Co., Ltd.
- P-064** **Analysis of mutations induced by mitomycin C in the bone marrow of DNA polymerase κ knockin *gpt* delta mice.**
Shigeki Motoyama¹, Akira Takeiri¹, Naoko A.Wada², Kou-ichi Jishage¹, Masayuki Mishima¹, Naoko Niimi³, Petr Grúz³, Kenichi Masumura³, Masami Yamada³, Takehiko Nohmi³
¹Chugai Pharmaceutical Co., Ltd., Fuji Gotemba Research Labs., ²Chugai Research Institute For Medical Science, Inc., ³Div. Genetics & Mutagenesis, NIHS
- P-065** **Spontaneous mutant frequencies in the liver and testis of young and aged *gpt* delta transgenic mice**
Naohiro Osugi^{1,2,3}, Kenichi Masumura¹, Naomi Toyoda-Hokaiwado¹, Tomo Inomata², Takehiko Nohmi¹
¹Division of Genetics and Mutagenesis, National Institute of Health Sciences, ²School of Veterinary Medicine, Azabu University, ³Japan SLC. Inc.
- P-066** **Genotoxicity of cyclophosphamide in liver and testis of *gpt* delta transgenic mouse**
Masayuki Hasuko^{1,2}, Kenichi Masumura¹, Naomi Toyoda-Hokaiwado¹, Tomo Inomata², Takehiko Nohmi¹
¹Division of Genetics and Mutagenesis, National Institute of Health Sciences, ²School of Veterinary Medicine, Azabu University
- P-067** **Tissue-specific mutation induction of *N*-ethyl-*N*-nitrosourea in B6C3F1 *gpt* delta mice**
Tomoko Sawai, Kazumi Yamauchi, Yoshiya Shimada, Shizuko Kakinuma
 Experimental Radiobiology for Children's Health Research Group, National Institute of Radiological Sciences
- P-068** **Mutagenicity evaluation of an antipsoriatic drug candidate SMD-502 in *gpt* delta mice and GDL1 cells**
Akira Takeiri, Kenji Tanaka, Akifumi Shioda, Asako Harada, Mariko Yano, Akira Kawase, Koji Yamaguchi, Tetsuya Mitsui, Masayuki Mishima
 Chugai Pharmaceutical Co., Ltd. Fuji Gotemba Research Labs.
- P-069** **The influence of oxidative DNA damage to germ cell genome**
Mizuki Ohno¹, Megumi Nakanishi¹, Kunihiko Sakumi², Masato Furuichi³, Yusaku Nakabeppu², Teruhisa Tsuzuki¹
¹Dept. of Medical Biophysics & Radiation Biology, Kyushu Univ., ²Div. of Neurofunctional Genomics, Med. Inst. of Bioregulation, Kyushu Univ. ³RI-center, Kyushu Univ.
- P-070** **Real-time single-molecule observation of anticancer drug-DNA interactions**
Yuko Yoshikawa, Tadayuki Imanaka
 Lab. Environ. Biotechnol., Res. Org. Sci. Eng., Ritsumeikan Univ.
- P-071** **Live cell imaging of micronucleus formations of mitomycin C-treated mouse m5S cells**
Ai Kawakita¹, Kaori Murata¹, Kiyoko Awatani², Seiji Kodama², Kenji Sugimoto¹
¹Graduate School of Life and Environmental Sciences, ²Frontier Science Innovation Center, Osaka Prefecture University
- P-072** **Biomarker discovery by the shotgun proteome analysis on the urine from arsenic exposed residents in West Bengal**
Takayoshi Suzuki¹, Suresh Thiruppathi¹, Tadashi Oshizawa¹, Akifumi Miyazawa^{1,3}, Tsutomu Tsuji³, Tadashi Uchino², Yoshiaki Ikarashi³, Tetsuji Nishimura³, Kazuhiro Suzuki¹
¹Div. Cellular and Gene Therapy Products, ²Div. Environmental Chemistry, National Institute of Health Sciences, ³Graduate School of Pharm. Sciences, Hoshi Univ.
- P-073** **Oxidative modification of alpha 1-antitrypsin in intrahepatic cholangiocarcinoma**
Raynoo Thanan^{1,2}, Shinji Oikawa¹, Yusuke Hiraku¹, Ning Ma³, Shosuke Kawanishi², Mariko Murata¹
¹Dept. Environ. Mol. Med., Mie Univ. Grad. Sch. Med., ²Fac. Pharm. Sci., Suzuka Univ. Med. Sci., ³Fac. Health Sci., Suzuka Univ. Med. Sci.
- P-074** **Proteomic analysis for arylhydrocarbon receptor (AhR) complex**
 (O-4) Shun Matsuda¹, Jun Adachi², Masaru Ihara¹, Masae Ikura³, Tsuyoshi Ikura³, Tomonari Matsuda¹
¹Research Center for Environmental Quality Management, Kyoto University, ²National Institute of Biomedical Innovation, ³Radiation Biology Center, Kyoto University

- P-075 Seasonal variation of mutagenicity of airborne particles collected at 14 sites in Japan and the influence of long-range transport from the China continent**
Osamu Kokunai¹, Masayuki Akiyama², Keiichi Arashidani³, Fumikazu Ikemori⁴, Youhei Inaba⁵, Hiroyuki Kataoka⁶, Naoya Kishikawa⁷, Nobuyuki Sera⁸, Yuuya Deguchi⁹, Kenichi Tonokura¹⁰, Akira Toriba¹¹, Kunihiro Funasaka¹², Takako Yamaguchi¹³, Kazunori Horasaki¹⁴, Tomohiro Hasei¹, Tetsushi Watanabe¹
¹Kyoto Pharm. Univ., ²Hokkaido Inst. Environ. Sci., ³Univ. Occup. Environ. Health, ⁴Nagoya City Inst. Environ. Sci., ⁵National Inst. Public Health, ⁶Shujitsu Univ., ⁷Nagasaki Univ., ⁸Fukuoka Inst. Health Environ. Sci., ⁹Nagasaki Intl. Univ., ¹⁰Tokyo Univ., ¹¹Kanazawa Univ., ¹²Osaka City Inst. Public Health Environ., ¹³Kobe Gakuin Univ., ¹⁴Tottori Pref. Inst. Public Health Environ. Sci.
- P-076 Genotoxicity of river waters by luminescence *umu* test**
Shiho kageyama¹, Daisuke Nakajima¹, Fujio Shiraishi¹, Ryo Kamata¹, Shin-ichiro Nagahora², Satoru Takahashi³, Junko Goukon⁴, Kayo Tokairin⁵, Hiroshi Tago⁶, Fumiko Oguchi⁷, Yoshiko Imazu⁸, Hidetomo Yamamori⁹, Kumi Miyajiri¹⁰, Hiroaki Kitamoto¹¹, Keisuke Hatakeyama¹², Yasuyuki Okayama¹³, Keiko Sueyoshi¹⁴, Kiwao Kadokami¹⁵, Katsuaki Sasai¹⁶, Akiyoshi Sawabe¹⁶, Sumio Goto¹⁷, Hiroaki Shiraishi¹, Noriyuki Suzuki¹
¹Natl. Inst. Environ. Studies, ²Hokkaido Pref., ³Iwate pref., ⁴Miyagi Pref., ⁵Yamagata Pref., ⁶Gunma Pref., ⁷Nagano Pref., ⁸Shizuoka Pref., ⁹Nagoya City, ¹⁰Kyoto Pref., ¹¹Hyogo Pref., ¹²Tottori Pref., ¹³Kitakyusyu City, ¹⁴Kagoshima Pref., ¹⁵The Univ. of Kitakyusyu, ¹⁶Kinki Univ., ¹⁷Azabu Univ.
- P-077 Extracts from total suspended particles in ambient air samples are mutagenic in the lungs of *gpt* delta mice**
Yasunobu Aoki¹, Hiromi Sato¹, Daisuke Nakajima¹, Shiho Kageyama¹, Yukari Sakashita¹, Rie Yanagisawa¹, Sumio Goto², Hidetsuru Matsushita³, Ken-ichi Masumura⁴, Takehiko Nohmi⁴
¹Natl. Inst. Environ. Studies(NIES), ²Azabu Univ., ³Univ. Shizuoka, ⁴Natl. Inst. Health Sci.
- P-078 Seasonal variation of tumor-promoting potential of airborne particulate and gaseous matter at ten places in Japan**
Kiyomi Ohmori¹, Youhei Sato², Daisuke Nakajima³, Shiho Kageyama³, Fujio Shiraishi³, Shinichiro Nagahora⁴, Takashi Sakuma⁵, Yoshimi Ohtani⁶, Wataru Kawai⁷, Atsushi Yoshida⁸, Kimiko Haraguchi⁹, Masahito Yoshidome¹⁰, Hirofumi Yajima¹¹, Sumio Goto²
¹Kanagawa Pref. Inst. Public Health, ²Azabu Univ., ³Natl. Inst. Environ. Studies, ⁴Hokkaido Inst. Environ. Sci., ⁵Miyagi Pref. Inst. Public Health & Environ., ⁶Gunma Pref. Inst. Public Health & Environ. Sci., ⁷Shizuoka Inst. Environ. & Hygiene, ⁸Tottori Pref. Inst. Public Health & Environ. Sci., ⁹Kitakyushu City Inst. Environ. Sci., ¹⁰Kagoshima Pref. Inst. Environ. Res. & Public Health, ¹¹Tokyo Univ. of Sci.
- P-079 Contribution of benzo[a]pyrene to mutagenicity in ambient air collected at 11 sites in Japan**
Daisuke Nakajima¹, Shiho Kageyama¹, Ryo Kamata¹, Fujio Shiraishi¹, Shinichiro Nagahora², Takashi Sakuma³, Eiji Watanabe⁴, Kimiyo Kumagai⁵, Yoshiko Imazu⁶, Fumikazu Ikemori⁷, Astushi Yoshida⁸, Yasuyuki Okayama⁹, Norihito Chaya¹⁰, Kiyomi Ohmori¹¹, Kiwao Kadokami¹², Hirofumi Yajima¹³, Qingyue Wang¹⁴, Sumio Goto¹⁵, Hiroaki Shiraishi¹, Noriyuki Suzuki¹
¹Natl. Inst. Environ. Studies, ²Hokkaido Pref., ³Miyagi Pref., ⁴Yamagata Pref., ⁵Gunma Pref., ⁶Shizuoka Pref., ⁷Nagoya City, ⁸Tottori Pref., ⁹Kitakyushu City, ¹⁰Kagoshima Pref., ¹¹Kanagawa Pref., ¹²Univ. Kitakyushu, ¹³Tokyo Univ. of Sci., ¹⁴Saitama Univ., ¹⁵Azabu Univ.
- P-080 Mutagenic effect of long-term inhalation of diesel nano-particles in the lungs and livers of *gpt* delta mice (O-6)**
Hiromi Sato¹, Yukari Sakashita¹, Ken-ichi Masumura², Akiko Furuyama¹, Seishiro Hirano¹, Takehiko Nohmi², Yasunobu Aoki¹
¹Natl. Inst. Environ. Studies (NIES), ²Natl. Inst. Health Sci.
- P-081 Comparison of sensitivity of cytotoxicity tests to nanoparticles**
Atsuko Matsuoka¹, Atsuko Miyajima¹, Reiko Kato¹, Keiko Sakai¹, Saiko Takaku², Akiyoshi Taniguchi²
¹National Institute of Health Sciences, ²National Institute for Materials Science
- P-082 Safety evaluation of nanomaterials prepared for household products**
Atsuko Matsuoka¹, Yukio Kodama², Midori Yoshida³, Kazuo Isama⁴, Fujio Nakajima², Kaoru Inoue³, Tsuyoshi Kawakami⁴, Akiyoshi Nishikawa³
National Institute of Health Sciences, ¹Division of Medical Devices, ²Division of Cellular and Molecular Toxicology, ³Division of Pathology, ⁴Division of Environmental Chemistry
- P-083 Silver nanoparticles induce phosphorylation of histone H2AX through formation of topoisomerase II-DNA cleavable complexes**
Tatsushi Toyooka, Yuko Ibuki
Inst. for Environ. Sci., Univ. of Shizuoka.

- P-084** **Development of nanotoxicity evaluation method focusing on p21-GFP using flow cytometer**
(O-7)
Yousuke Toduka¹, Tatsushi Toyooka¹, Manabu Koike², Yuko Ibuki¹
¹Inst. Environ. Sci., Univ. of Shizuoka, ²Nat. Inst. Radiol. Sci.
- P-085** **Evaluation of the *in vitro* carcinogenicity of multi-wall carbon nanotubes using Bhas 42 cell transformation assay**
Shin Asada¹, Yoshiaki Saitoh¹, Kohji Yamakage¹, Masamitsu Honma²
¹Hatano Research Institute, Food and Drug Safety Center, ²National Institute of Health Sciences
- P-086** **Chromosomal aberration test of multi-wall carbon nanotubes (MWCNT) using CHL/IU cells**
Toshitaka Takahashi¹, Sin Asada¹, Takumi Hara¹, Tomoyasu Toyozumi¹, Yoshiaki Saitoh¹,
Humiaki Kumagai¹, Kohji Yamakage¹, Masamitsu Honma²
¹Hatano Research Institute, Food and Drug Safety Center, ²National Institute of Health Sciences
- P-087** **Genotoxicity and cell transformation assay of multi-wall carbon nanotubes**
Masumi Asakura, Kasuke Nagano, Heihachiro Arito, Shoji Fukushima
Japan Industrial Safety and Health Association, Japan Bioassay Research Center
- P-088** **Nitrative DNA damage induced by multi-wall carbon nanotube in human lung epithelial cells**
Feiye Guo¹, Ning Ma², Shosuke Kawanishi³, Mariko Murata¹, Yusuke Hiraku¹
¹Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine, Japan, and ²Faculties of Health Science and ³Pharmaceutical Sciences, Suzuka University of Medical Science, Japan
- P-089** ***In vivo* genotoxicity induced by nanoparticles, multi-wall carbon nanotube (MWCNT) and magnetite (MGT)**
Yoko Matsumoto^{1,2}, Kousuke Ishino¹, Tatsuya Kato^{1,3}, Shuichi Masuda³, Sumio Goto², Takashi Sugimura¹,
Keiji Wakabayashi³, Yukari Totsuka¹
¹National Cancer Center Research Institute, ²Graduate School of Azabu University, ³Graduate School of Shizuoka University
- P-090** **Analysis of DNA adduct formation in mice exposed to nanomaterials**
Kousuke Ishino¹, Tatsuya Kato^{1,2}, Shuichi Masuda², Tomonari Matsuda³, Takashi Sugimura¹,
Keiji Wakabayashi², and Yukari Totsuka¹
¹National Cancer Center Research Institute, ²University of Shizuoka, ³Kyoto University
- P-091** **Nitrative DNA damage induced by carbon black in human lung epithelial cells**
Yoshihiro Nishikawa¹, Ning Ma², Shosuke Kawanishi³, Mariko Murata¹, Yusuke Hiraku¹
¹Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine, ²Faculties of Health Science and ³Pharmaceutical Sciences, Suzuka University of Medical Science
- P-092** **Effect of cigarette smoke and ethanol on mutagenic activation of environmental carcinogens**
Kenjiro Tatematsu¹, Yukio Mori², Akiyoshi Nishikawa²
¹Gifu Pharmaceutical University, ²National Institute of Health Science
- P-093** **Chemical analysis and mutagenicity of tobacco leaf with several additive agents**
Tadamichi Ohkubo¹, Yohei Inaba¹, Kazutoshi Sugita², Shigehisa Uchiyama¹, Hiromitsu Ogata¹, Gen Suzuki³,
Naoki Kunugita¹
¹National Institute of Public Health, ²Mitsubishi Chemical Analytech Co., Ltd., ³International University of Health and Welfare
- P-094** **Mutagenicity and chemical analysis of whole tobacco in Japanese cigarette brands**
Yohei Inaba¹, Tadamichi Ohkubo¹, Kazutoshi Sugita², Shigehisa Uchiyama¹, Hiromitsu Ogata¹, Gen Suzuki³,
Naoki Kunugita¹
¹National Institute of Public Health, ²Mitsubishi Chemical Analytech Co., Ltd., ³International University of Health and Welfare
- P-095** **Chemical analysis and mutagenicity assay of ITADORI cigarette (tobacco of Japanese knotweed)**
Koichi Sugiyama¹, Yohei Inaba², Kazutoshi Sugita³, Masako Kitada⁴, Itsuro Yoshimi², Shigehisa Uchiyama²,
Makishige Asano², Naoki Kunugita²
¹Azabu University, ²National Institute of Public Health, ³Mitsubishi Chemical Analytech Co., Ltd., ⁴Sapporo Gakuin University
- P-096** **Biological effects of UVA on *Drosophila* larvae**
Tomoe Negishi¹, Shoichi Higashi², Kazuaki Kawai³, Hiroshi Kasai³
¹Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, ²National Institute for Basic Biology, National Institute of Natural Sciences, ³Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health

- P-097 Roles of photolyase for DNA damage by UV in *Thermus thermophilus***
Mayumi Abe¹, Mariko Maenishi¹, Toshihiro Ohta², Tatsuo Nunoshiba¹
¹International Christian University, ²School of Life Science, Tokyo University of Pharmacy and Life Sciences
- P-098 Photomutagenicity of quinolone compounds in photomutagenicity test using microorganisms**
Shinya Wakamatsu, Shozo Ogura, Saori Fujishima, Nobuhiko Higashihara, Renge Suzuki, Makoto Nakai
 Chemicals Evaluation and Research Institute, Japan, Hita (CERI Hita)
- P-099 Evaluation of photogenotoxicity of phenalenone**
Ryoko Ishii¹, Takeji Takamura¹, Yoshimitsu Oda²
¹Department of Applied Chemistry Kanagawa Institute of Technology, ²Chinese Academy of Sciences
- P-100 Influence of pseudo-sunlight irradiation to mutagenicity of the aqueous solution of chemical substance designated as PRTR includes carbaryl**
 (O-5)
Akiko Yamamoto¹, Aya Inaba¹, Youhei Inaba², Naoki Kunugita², Katsumi Uchida¹, Koji Tsuchiya¹,
Sumio Goto³, Hirofumi Yajima¹
¹Tokyo University of Science, ²National Institute of Public Health, ³Azabu University
- P-101 New antiestrogens without genotoxic and estrogenic actions for breast cancer therapy**
Yoshinori Okamoto^{1,2}, Y. R. Santosh Laxmi¹, Kanako Okamoto¹, Naomi Suzuki¹, Shinya Shibutani¹
¹Dept. of Pharmacol. Sci., SUNY at Stony Brook, USA, ²Faculty of Pharmacy, Meijo Univ.
- P-102 Mutagenicity and anti-cancer activity of DNA ADP-ribosylating protein, pierisin-1**
Hideshi Koshida^{1,2}, Masafumi Yamamoto¹, Yukari Totsuka¹, Tsuyoshi Nakano¹, Yuko Hibiya¹,
 Azusa Nakaguchi¹, Toshihiro Ohta², Kazunari Akiyoshi³, Takashi Sugimura¹, Keiji Wakabayashi^{1,4}
¹National Cancer Center Research Institute, ²Tokyo University of Pharmacy and Life Sciences, ³Tokyo Medical and Dental
 University, ⁴University of Shizuoka
- P-103 Isolation and identification of an antimutagenic component in the juice of *Vitis coignetiae* Pulliat which prevents skin tumor promotion in mice**
Sakae Arimoto-Kobayashi¹, Xiaomeng Zhang¹, Rie Ishida¹, Yuta Yuhara¹, Tomonori Kamiya¹,
 Tsutomu Hatano¹, Tomoe Negishi¹, Goro Okamoto²
¹Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, ²Faculty of Agriculture, Okayama University
- P-104 Mutagenicity-modulating effects of a spice component capsaicin in Ames test**
Masami Yamada, Makiko Takamune, Takehiko Nohmi
 Division of Genetics and Mutagenesis, National Institute of Health Sciences
- P-105 Chemopreventive effects of silymarin and capsaicin on mutagenesis and carcinogenesis using *gpt* delta transgenic rat.**
Mina Muramatsu^{1,2}, Naomi Toyoda-Hokaiwado¹, Yumiko Yasui³, Kenichi Masumura¹, Makiko Takamune¹,
 Masami Yamada¹, Takuji Tanaka⁴, Toshihiro Ohta², Takehiko Nohmi¹
¹Division of Genetics and Mutagenesis, National Institute of Health Sciences, ²Tokyo University of Pharmacy and Life
 Sciences, ³School of Veterinary Medicine, Rakuno Gakuen University, ⁴Tohkai Cytopathology Institute
- P-106 Mutagenicity and NO releasing ability of five-membered ring containing sulfur and nitrosated nitrogen**
Yuta Ono, Keiko Inami, Masataka Mochizuki
 Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-107 Mutagenicity of *N*-nitrosodialkylamine by chemical models for cytochrome P450 in Ames assay; Ruthenium porphyrin and oxidant**
Hideaki Seino, Kyohei Yoshimitsu, Keiko Inami, Masataka Mochizuki
 Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-108 Antimutagenicity of *Glycyrrhiza glabra* L. extract toward alkylating *N*-nitroso-*N*-methylurea**
Yusuke Mine, Keiko Inami, Masataka Mochizuki
 Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-109 Effect of *Coriandrum sativum* and *Petroselinum crispum* on cadmium-induced micronuclei**
Haruka Suzuki¹, HuiJuan Jia², Yusaku Nagae¹, Hideaki Endo¹, Huifeng Ren¹
¹Tokyo University of Marine Science and Technology, ²Tokyo University

- P-110 Essential structure of ascorbic acid for radical trapping activity**
Shogo Nomura, Keiko Inami, Masataka Mochizuki
Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-111 Synthesis of vitamin E analogues with expanded π -conjugate system and evaluation of antioxidant activity**
Masanori Harada, Keiko Inami, Masataka Mochizuki
Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-112 Augmentation of 3-methylcholanthrene-mediated CYP1A1 induction by a BCPR inhibitor, Ko143**
Masashi Sekimoto, Takuomi Hosaka, Ryota Uchiyama, Kiyomitsu Nemoto, Masakuni Degawa
Dept. Mol. Toxicol., Sch. Pharm. Sci., Univ. of Shizuoka
- P-113 Tumor promoting activity and induction of metabolic enzyme for polycyclic aromatic compounds**
Kentaro Misaki^{1,2}, Takeji Takamura³, Hideoki Ogawa¹, Kenji Takamori¹, Mitsuaki Yanagida¹
¹Institute for Environmental and Gender Specific Medicine, Graduate School of Medicine, Juntendo University, ²Center for Marine Environmental Studies, Ehime University, ³Department of Applied Chemistry, Kanagawa Institute of Technology
- P-114 The structure of mutagen formed from *N*-nitrosodialkylamines and active oxygen species**
Masafumi Yoshida, Keiko Inami, Masataka Mochizuki
Tokyo University of Science, Faculty of Pharmaceutical Sciences
- P-115 Mutagenicity of β -carboline derivatives isolated from Jamaica quassia extract**
Masaharu Asanoma¹, Atsuko Tada², Shoichiro Noguchi¹, Aya Onoda¹, Kazuhiko Takahashi³, Kiyosei Takasu⁴, Kenji Sugimoto⁵, Hidetoshi Tokuyama⁵, Takeshi Yamazaki², Yoko Kawamura², Hisaya Terada¹
¹Nagoya City Pub. Health Res. Inst., ²National Inst. of Health Sci., ³Yokohama Col. Pharm., ⁴Grad. Sch. Pharm. Sci. Kyoto Univ., ⁵Grad. Sch. Pharm. Sci. Tohoku Univ.
- P-116 Determination of mutagenic/carcinogenic nitrated polycyclic aromatic hydrocarbons in airborne particles with a two-dimensional HPLC system**
Tomohiro Hasei, Kana Kobayashi, Takashi Fukuda, Tetsushi Watanabe
Kyoto Pharmaceutical University
- P-117 Establishment of a bioavailability-assay system for the daikon-derived antimutagen, 4-methylthio-3-butenyl isothiocyanate**
Shotaro Itoi¹, Yasushi Nakamura^{1,2}, Koji Shirota², Noboru Suetome², Akiyoshi Nishikawa³, Kumiko Ogawa³, Young-Man Cho³, Eun Young Park¹, Kenji Sato¹
¹Dept. Food Sciences and Nutritional Health, Kyoto Pref. Univ., ²Horticultural Division, Kyoto Pref. Agric. Res. Inst., ³Division of Pathology, National Institute of Health Sciences
- P-118 Is 1 mM upper concentration limit acceptable for in vitro chromosomal aberration test for industrial chemicals?**
Takeshi Morita¹, Masamitsu Honma², Kumiko Fukushima¹, Kaoru Morikawa¹
¹Division of Safety Information, NIHS, ²Division of Mutagenesis and Genetics, NIHS
- P-119 Risk assessment of carcinogenic air pollutants – Comparison between assessment values derived from epidemiological data and from animal experimental data –**
Michi Matsumoto, Yasunobu Aoki
National Institute for Environmental Studies