

# Wednesday, November 16

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**12:25**            **Opening**        Chie Furihata (President, JEMS2005)

**12:30~14:30**    **Symposium (1)**

**“-omics and Mutation Research”**

Chairpersons: Takayoshi Suzuki (NIHS, Div. of Cellular and Gene Therapy Products)  
Yasushi Yamazoe (Div. of Drug Metab. & Mol. Toxicol, Grad. Sch. of Pharm. Sci., Tohoku Univ.)

- S1-1      Transcriptomics – Can gene expression profiles distinguish the genotoxic hepatocarcinogens?  
Takayoshi Suzuki and Chie Furihata (Organizers of the Collaborative Study Group on Toxicogenomics in JEMS/MMS)
- S1-2      Analyses of protein expression profile in NSCLC for identification of novel biomarkers with MALDI-TOF MS  
Kiyoshi Yanagisawa, Takashi Takahashi
- S1-3      Studies on Epigenetic Information Stored in Cells Using On-Chip Single-Cell-Based Analysis System.  
Kenji YASUDA (Dept. Life Sciences, Grad. Schl. Arts & Sci. The Univ. of Tokyo)
- S1-4      Metabolomics – As a new tool for prediction and mechanistic elucidation of chemical-induced toxicity  
Yasushi Yamazoe (Div. of Drug Metab. & Mol. Toxicol, Grad. Sch. of Pharm. Sci., Tohoku Univ.)

**14:30~16:00**    **Poster Session (1) (Discussion)**      (ダイヤモンド)

**16:00~17:10**    **Plenary Lecture (1)**

Chairperson: Chie Furihata (President, JEMS2005)

Chromosome segregation and DNA damage repair

Mitsuhiro Yanagida (Graduate School of Biostudies, Kyoto University and Initial Research Project, Okinawa Institute of Science and Technology)

**17:10~18:50**    **Symposium (2)**

**“Challenge against carcinogenesis, a big Black Box”**

Chairpersons: Tatsuo Nunoshiwa (Graduate School of Life Sciences, Tohoku University)  
M Watanabe-Akanuma (Kureha Chemical Ind., Co. Ltd)

- S2-1      DNA adductome strategy for detection of multiple DNA adducts  
Tomonari Matsuda<sup>1</sup>, Robert A. Kanaly<sup>1</sup>, Tomoyuki Hanaoka<sup>2</sup>, Haruhiko Sugimura<sup>3</sup>, Hirokazu Toda<sup>1</sup> and Saburo Matsui<sup>1</sup> (Kyoto University<sup>1</sup>, National Cancer Institute<sup>2</sup>, Hamamatsu University School of Medicine<sup>3</sup>)
- S2-2      Recognition and repair of DNA base lesions for protection against cancer  
Kaoru Sugasawa (Cellular Physiology Laboratory, RIKEN Discovery Research Institute; SORST, Japan Science and Technology Agency)
- S2-3      Inducers for chromosome instability and the mechanisms  
Tatsuo Nunoshiwa (Graduate School of Life Sciences, Tohoku University)

S2-4 DNA double strand breaks causing deletion of the p16 tumor suppressor gene in human cancer cells  
Takashi Kohno, Masanori Sato and Jun Yokota (Biology Division, National Cancer Center Research  
Institute)

## Thursday, November 17

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**9:30~11:00**     **Poster Session (2) (Discussion)**     (ダイヤモンド)

**11:00~12:00**     **Oral Session (1) –Toxicogenomics, Environmental Monitoring, Prediction of mutagens–**     (大ホール)

Chairpersons: Takayoshi Suzuki (NIHS, Div. of Cellular and Gene Therapy Products)  
M. Nakajima (Bio-safety Res. Ctr.)

- O-1     Carcinogen characteristic post-translational modifications detected in the distinct hepatic proteins in a 28-day repeated dose study  
H Yamanaka<sup>1</sup>, Y Sudo<sup>1</sup>, Y Yakabe<sup>1</sup>, K Saito<sup>2</sup>, K Sumida<sup>2</sup>, M Sekijima<sup>3</sup>, K Nakayama<sup>3</sup> and T Shirai<sup>4</sup>  
(Chemicals Evaluation and Research Institute<sup>1</sup>, Sumitomo Chemical Co.,Ltd.<sup>2</sup>, Mitsubishi Chemical Safety Institute Ltd.<sup>3</sup>, Graduate School of Medical Sciences, Nagoya City Univ.<sup>4</sup>)
- O-2     Dose-dependent changes in gene expression induced by diethylnitrosamine and ethylnitrosourea in mouse liver determined by quantitative RT-PCR  
T Watanabe<sup>1</sup>, M Hirayama<sup>1</sup>, S Hamada<sup>2</sup>, C Namiki<sup>3</sup>, M Nakajima<sup>4</sup>, T Suzuki<sup>5</sup> and C Furihata<sup>1</sup>  
(Aoyama Gakuin Univ.<sup>1</sup>, Mitsubishi Chem. Safety Inst. LTD.<sup>2</sup>, SSP Co. Ltd<sup>3</sup>, Biosafety Res. Cent., Foods, Drugs, and Pesticides<sup>4</sup>, NIHS<sup>5</sup>) (JEMS/MMS/Toxicogenomics Collaboration Group))
- O-3     Identification of the major mutagens in surface soil of Nagoya, Japan  
N Gao<sup>1</sup>, S Yoshida<sup>1</sup>, M Asanoma<sup>2</sup>, T Uchiyama<sup>3</sup>, S Miyairi<sup>3</sup>, T Watanabe<sup>4</sup>, T Hirayama<sup>4</sup>, H Nukaya<sup>5</sup>, T Mizutani<sup>1</sup> and K Takahashi<sup>1</sup> (Nagoya City Univ.<sup>1</sup>, Nagoya City Health Res. Inst.<sup>2</sup>, Nihon Univ.<sup>3</sup>, Kyoto Pharmacology Univ.<sup>4</sup>, Univ. of Shizuoka<sup>5</sup>)
- O-4     Computerized prediction system of mutagenicity of organic compounds by application of classification decision tree  
K Sawatari<sup>1</sup>, T Matsushima<sup>2</sup> (National Institute of Industrial Health<sup>1</sup>, Japan Bioassay Research Center<sup>2</sup>)
- O-5     Strategy for *in silico* evaluation of chemical genotoxicity  
A Hirose, E Kamata, M Takahashi, T Morita, M Ema and M. Hayashi (National Institute of Health Sciences)

**12:15~13:30**     **Luncheon Seminar (sponsored by Affymetrix Japan K.K.)**     (鳳凰)

“Current state and the future of genomewide gene analysis by GeneChip<sup>®</sup> System”  
Hisato Yamazaki (Senior Field Application Specialist, Affymetrix Japan K.K.)

**13:30~14:30**     **General Meeting, Award Ceremony**

**14:30~16:15**     **Award Lecture**

Chairperson: Takehiko Nohmi (President, JEMS)

[JEMS Award, 2005]

Molecular biology and molecular epidemiology of enzymes responsible for the metabolic activation of environmental mutagens  
Tetsuya Kamataki (Division of Drug Metabolism, Graduate School of Pharmaceutical Sciences, Hokkaido University)

[JEMS Achievement Award, 2005]

Properties of reactive intermediates for carcinogenic *N*-nitroso compounds and novel bifunctional nitrosamines as candidates for antitumor lead compounds

Satoko Ishikawa (Kyoritsu University of Pharmacy)

Planar Catechin Analogue: a New Type of Synthetic Antimutagen Derived from Natural Antioxidant

Kiyoshi Fukuhara (National Institute of Health Sciences)

**16:30~17:40 Plenary Lecture (2)**

Chairperson: Chie Furihata (President, JEMS2005)

New trends in human genomics: Genome Network Project and Metagenomics

Yoshiyuki Sakaki (RIKEN Genomic Sciences Center)

**18:00~20:00 Banquet (鳳凰)**

# Friday, November 18

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## 9:30~10:20 Morning Lecture

Chairperson: Chie Furihata (President, JEMS2005)

Just a matter of Medaka, none the less Medaka

Akihiro Shima (Institute for Environmental Sciences)

## 10:20~12:00 Oral Session (2) –DNA damage, Anti-mutagens, micronuclei test, Development of tests– (大ホール)

Chairpersons: T Takamura (Natl. Cancer Center Res. Inst.)

K Matsumoto (Institute of Environmental Toxicology)

Wakata

- O-6 Role of nitrate and oxidative DNA damage in urinary bladder carcinogenesis induced by infection with *Schistosoma haematobium*  
Hatasu Kobayashi<sup>1</sup>, Yusuke Hiraku<sup>1</sup>, Ning Ma<sup>2</sup>, Shinji Oikawa<sup>1</sup>, Mariko Murata<sup>1</sup> and Shosuke Kawanishi<sup>1</sup> (Department of Environmental and Molecular Medicine<sup>1</sup> and Department of Anatomy<sup>2</sup>, Mie Univ.)
- O-7 Isolation of antimutagenic factor(s) in the edible mushroom *Agrocybe cylindracea*  
A. Shiozawa, K. Taira, S. Arimoto, K. Okamoto, T. Negishi (Okayama Univ.)
- O-8 Study on rat *in vivo* comet assay treated with CPA, DMBA or MMS.  
Y Kizaki, H Sumida, Y Yamamoto and J Kawahara (KIRIN BREWERY Co., Ltd. Pharmaceutical Development Laboratories)
- O-9 Quantitative detection of  $\gamma$ -radiation-induced DNA double-strand breaks using  $\gamma$ -H2AX foci in mouse organs, lymphocytes and *scid* lymphoma cell line  
H Nakajima, R Kikuya, T Nomura and K Ohtani (Osaka Univ.)
- O-10 Protective effect of ascorbic acid against double-strand breaks in reconstituted chromatin visualized by single-molecule observation  
Y. Yoshikawa<sup>1</sup>, Y. Oda<sup>1</sup>, K. Hizume<sup>2</sup>, K. Takeyasu<sup>2</sup>, S. Araki<sup>2</sup> (Nagoya Bunri College<sup>1</sup>, Kyoto Univ.<sup>2</sup>)
- O-11 Induction of micronuclei in gill cells of goldfish by X-irradiation  
Akinori Takai<sup>1</sup>, Kazuo Fujikawa<sup>2</sup> (Osaka Shin-Ai College<sup>1</sup>, Kinki University<sup>2</sup>)
- O-12 Evaluation of flow cytometric analysis for micronucleus induction in mouse peripheral blood using MicroFlow™ Kit  
S Muto, H Daigo, E Yamamura, H Baba, Y Uno (Mitsubishi Pharma Corporation)
- O-13 On-chip bioluminescence reporter assay for genotoxic substances using three-dimensional microfluidic network  
H Tani, K Maehana, T Kamidate (Hokkaido Univ)

## 13:00~14:30 Oral Session (3) –DNA repair, Mutation– (大ホール)

Chairpersons: T Ohta (School of Life Science, Tokyo Univ. of Pharmacy and Life Science.)

M Honma (NIHS)

- O-14 Involvement of mismatch repair in mutagenesis caused by alkylating agents  
K. Taira, S. Kaneto, E. Takahashi, S. Arimoto, K. Okamoto, T. Negishi (Okayama Univ.)

- O-15 Mutagens produced in the reaction mixture of glucose fragmentation products with amino compounds  
S Nishijima, T Watanabe, T Hasei and T Hirayama (Kyoto Pharmaceutical University)
- O-16 Mutation spectra of *N*-acetoxy-3-aminobenzanthrone, a derivative from the environmental pollutant 3-nitrobenzanthrone, in human cells  
H NISHIDA<sup>1</sup>), M KAWANISHI<sup>1</sup>), T TAKAMURA<sup>2</sup>), K WAKABAYASHI<sup>2</sup>), T YAGI<sup>1</sup>)  
(Front.Sci.Innov.Center, Osaka Pref. Univ.<sup>1</sup>), Cancer Prev. Proj., Natl. Cancer Center Res. Inst.<sup>2</sup>)
- O-17 Age-dependent accumulation of spontaneously arising mutations at the *Dlb-1* locus in small intestinal stem cells of mice  
H Kasanami<sup>1</sup>), S Banba<sup>2</sup>), N Kagawa<sup>2</sup>), K Fujikawa<sup>1</sup>2) (Interdisciplinary Grad. School of Science and Technology, Kinki Univ.<sup>1</sup>), Faculty of Science and Technology, Kinki Univ.<sup>2</sup>)
- O-18 In vivo mutagenicity of diesel exhaust inhalation in the testis of *gpt* delta mice  
AH Hashimoto<sup>1</sup>), K Amanuma<sup>1</sup>), K Masumura<sup>2</sup>), T Nohmi<sup>2</sup>) and Y Aoki<sup>1</sup>) (Natl. Inst. for Env. Stud.<sup>1</sup>), Natl. Inst. of Health Sci.<sup>2</sup>)
- O-19 DNA double strand break repair and cell cycle in a human lymphoblastoid cell line  
Y Takashima, M Sakuraba, T Koizumi, H Sakamoto, M Hayashi, M Honma (NIHS)
- O-20 Application of CGH and SNP arrays for chromosome analysis  
Yang Luan<sup>1</sup>), Masamitsu Honma<sup>2</sup>), Suresh Thiruppathi<sup>1</sup>), Mieko Kogi<sup>3</sup>), Teruhide Yamaguchi<sup>1</sup>), Takayoshi Suzuki<sup>1</sup>) (NIHS, Div. of Cellular and Gene Therapy Products<sup>1</sup>), NIHS, Div. of Genetics and Mutagenesis<sup>2</sup>), Kanazawa Institute of Technology<sup>3</sup>)

### 14:30~16:45 Symposium (3)

#### ““NEGATIVE” symposium - Disclose the meaning of NEGATIVE”

Chairpersons: Y. Uno (Toxicology Laboratory, Mitsubishi Pharma Corporation)  
M. Nakajima (Bio-safety Res. Ctr.)

基調講演 “Proving” a negative result: When is enough enough?

James T. MacGregor (Toxicology Consulting Services, Arnold, MD, U.S.A.)

S3-1 Are negative results no achievements? - Academic cases

Chie Furihata (Biological Science, School of Science & Engineering, Aoyama Gakuin University)

S3-2 Follow-up studies to support risk negative – Case studies in pharmaceutical companies

Wataru Takasaki (Medicinal Safety Research Laboratories, Sankyo Co., Ltd.)

S3-3 Can we show a negative result by a statistical method?

Takashi Omori (Department of Biostatistics Kyoto University School of Public Health)

S3-4 Acceptable conditions of validity of test negatives in the safety evaluation of chemicals

Toshio Sofuni (Formerly Division of Genetics and Mutagenesis, National Institute of Health Sciences)

### 16:45~17:00 The Best Presentation Award Ceremony

**Closing Ceremony** Chie Furihata (President, JEMS2005)

## Poster Presentations (1) Wednesday, November 16 (14:30~16:00) ダイヤモンド

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- P-1 Evaluation of photo-mutagenicity and photo-cytotoxicity of food coloring agents  
Sakae Arimoto-Kobayashi<sup>1</sup>, Masaki Machida, Keinosuke Okamoto and Akie Yamaguchi (Faculty of Pharmaceutical Sciences, Okayama University)
- P-2 Evaluation of mutagenic and co-mutagenic potentials of intermediate frequency magnetic field by bacterial mutation test.  
S. Nakasono<sup>1</sup>, M. Ikehata<sup>2</sup>, T. Shigemitsu<sup>1</sup>, T. Negishi<sup>1</sup> (CRIEPI<sup>1</sup>, RTRI<sup>2</sup>)
- P-3 Genotoxic activation of 3,6-Dinitrobenzo[*e*]pyrene in SOS/*umu* assay  
Y Oda<sup>1</sup>, T Watanabe<sup>2</sup> and T Hirayama<sup>2</sup> (Osaka Prefectural Institute of Public Health<sup>1</sup>, Kyoto Pharmaceutical University<sup>2</sup>)
- P-4 Development of bacterial tester strains to detect the mutagenicity of polycyclic aromatic hydrocarbons sensitively and specifically  
M Yamada, K Matsui, and T Nohmi (NIHS)
- P-5 The spectrum of *Bacillus subtilis sacB* gene mutations in the radioresistant bacterium *Deinococcus grandis*  
I Narumi and K Satoh (JAERI)
- P-6 Involvement of mismatch repair in mutagenesis caused by alkylating agents  
K. Taira, S. Kaneto, E. Takahashi, S. Arimoto, K. Okamoto, T. Negishi (Okayama Univ.)
- P-7 Mutagens produced in the reaction mixture of glucose fragmentation products with amino compounds  
S Nishijima, T Watanabe, T Hasei and T Hirayama (Kyoto Pharmaceutical University)
- P-8 Characterization of DNA repair deficient mutants for deamination and alkylation damages in *Thermus thermophilus*  
K Mochizuki, S Tokishita, T Ohta, H Yamagata (School of Life Science, Tokyo Univ. of Pharmacy and Life Science.)
- P-9 Photomutagenicity of maltol, a food additive flavoring, with UVA-irradiation  
M Watanabe-Akanuma<sup>1</sup>, R Takagi<sup>1</sup>, Y Inaba<sup>2</sup> and T Ohta<sup>2</sup> (Kureha Chemical Ind., Co. Ltd<sup>1</sup>, Tokyo Univ. Pharm. & Life Sci.<sup>2</sup>)
- P-10 Clastogenicity and mutational specificity of a *N*-hydroxy metabolite of aminophenylnorharman  
Ohe T.<sup>1</sup>, Mizuno T.<sup>1</sup>, Totsuka Y.<sup>2</sup>, Takamura T.<sup>2</sup>, Oda Y.<sup>3</sup>, Wakabayashi K.<sup>2</sup> (Kyoto Women's Univ.<sup>1</sup>, Natl. Cancer Center Res. Inst.<sup>2</sup>, Osaka Pref. Inst. of Pub. Health<sup>3</sup>)
- P-11 Hyperrecombination of *Escherichia coli dam/mutS* double mutants  
T Sawai<sup>1,2</sup>, H Maki<sup>2</sup> (Nara Institute of Science and Technology<sup>1</sup> Osaka Prefecture University<sup>2</sup>)
- P-12 Characterization of UV endonuclease deficient mutants in *Thermus thermophilus*  
M Sakahira, S Tokishita, T Ohta, H Yamagata (School of Life Science, Tokyo Univ. of Pharmacy and Life Science.)
- P-13 Protective effect of nucleosides on lethality and mutation induction of *Escherichia coli* strains exposed to UVB  
H Nishioka, Y Hirano and S Matsumoto (Kyoto Institute for Bioscience)
- P-14 Effect of low dose-rate gamma-irradiation on 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) induced mutagenesis in *gpt* delta mice.  
K Masumura<sup>1</sup>, M Ikeda<sup>1,2</sup>, Y Sakamoto<sup>1</sup>, B Wang<sup>3</sup>, M Neno<sup>3</sup>, K Sakuma<sup>2</sup>, I Hayata<sup>3</sup>, T Nohmi<sup>1</sup> (National. Inst. Health Sci.<sup>1</sup>, Grad. Sch. Kagawa Nutr. Univ.<sup>2</sup>, National. Inst. Radiolog. Sci.<sup>3</sup>)
- P-15 Comparison of sensitivity between the spot test and the miniscreen assay  
N Miyata, T Aoki, C Shimada, K Watanabe, T Inui, K Kitamura (Drug Safety Research Laboratories, Tanabe Seiyaku Co. Ltd.)

- P-16 Mutation spectra of *N*-acetoxy-3-aminobenzanthrone, a derivative from the environmental pollutant 3-nitrobenzanthrone, in human cells  
H NISHIDA<sup>1)</sup>, M KAWANISHI<sup>1)</sup>, T TAKAMURA<sup>2)</sup>, K WAKABAYASHI<sup>2)</sup>, T YAGI<sup>1)</sup>  
(Front.Sci.Innov.Center, Osaka Pref. Univ.<sup>1)</sup>, Cancer Prev. Proj., Natl. Cancer Center Res. Inst.<sup>2)</sup>)
- P-17 Mutational analyses of p53 deficient *gpt* delta mice treated with *N*-bis(2-hydroxypropyl)nitrosamine and 2-amino-3methylimidazo[4,5-*f*]quinoline .  
Y Sakamoto<sup>1)</sup>, K Masumura<sup>1)</sup>, M Ikeda<sup>1)</sup>, A Hirata<sup>2)</sup>, T Tsukamoto<sup>2)</sup>, M Tatematsu<sup>2)</sup>, T Nohmi<sup>1)</sup> (Div. Genetics and Mutagenesis, NIHS<sup>1)</sup>, Div. Oncol. Pathol., Aichi Cancer Ctr. Res. Inst.<sup>2)</sup>)
- P-18 Mutation and apoptosis induced by X-ray radiation in *Drosophila* somatic cells  
T Negishi<sup>1)</sup>, M Toyoshima<sup>1)</sup>, K Okamoto<sup>1)</sup>, A Fukunaga<sup>2)</sup>, K Fujikawa<sup>3)</sup> and F Imura<sup>1)</sup> (Okayama Univ.<sup>1)</sup>, Osaka City Univ.<sup>2)</sup>, Kinki Univ.<sup>3)</sup>)
- P-19 *In vitro* genotoxicity of flavonoids in dietary supplements  
T Kimoto<sup>1)</sup>, H Sakamoto<sup>1)</sup>, M Sakuraba<sup>1)</sup>, T Koizumi<sup>1)</sup>, Y Takashima<sup>1)</sup>, T Kobayashi<sup>2)</sup>, Y Kasahara<sup>2)</sup>, M Hayashi<sup>1)</sup>, M Honma<sup>1)</sup> (NIHS<sup>1)</sup>, Teijin Pharma Ltd.<sup>2)</sup>)
- P-20 Age-dependent accumulation of spontaneously arising mutations at the *Dlb-1* locus in small intestinal stem cells of mice  
H Kasanami<sup>1)</sup>, S Banba<sup>2)</sup>, N Kagawa<sup>2)</sup>, K Fujikawa<sup>1)</sup> (Interdisciplinary Grad. School of Science and Technology, Kinki Univ.<sup>1)</sup>, Faculty of Science and Technology, Kinki Univ.<sup>2)</sup>)
- P-21 p53-dependent *in vitro* genotoxicity induced by spindle poisons  
H Sanada, H Sakamoto, M Sakuraba, T Koizumi, Y Takashima, M Hayashi, M Honma (NIHS)
- P-22 Interallelic homologous recombination and target integration induced by DNA double strand breaks  
M Honma, M Sakuraba, T Koizumi, Y Takashima, H Sakamoto, M Hayashi (NIHS)
- P-23 *In vivo* mutagenicity of diesel exhaust inhalation in the testis of *gpt* delta mice  
AH Hashimoto<sup>1)</sup>, K Amanuma<sup>1)</sup>, K Masumura<sup>2)</sup>, T Nohmi<sup>2)</sup> and Y Aoki<sup>1)</sup> (Natl. Inst. for Env. Stud.<sup>1)</sup>, Natl. Inst. of Health Sci.<sup>2)</sup>)
- P-24 *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine-induced mutations in the *rpsL* transgenic zebrafish embryos persisting in the adult fish  
K Amanuma, N Nagaya, Y Aoki (National Institute for Environmental Studies)
- P-25 DNA double strand break repair and cell cycle in a human lymphoblastoid cell line  
Y Takashima, M Sakuraba, T Koizumi, H Sakamoto, M Hayashi, M Honma (NIHS)
- P-26 Mutagenic and toxic effects of UVA laser irradiation in yeast  
Kazuo Negishi<sup>1)</sup>, Chie Otsuka<sup>1)</sup>, Shoichi Higashi<sup>2)</sup>, Takanori Nakamura<sup>2)</sup>, Masakatsu Watanabe<sup>2)</sup>, and Tomoe Negishi<sup>1)</sup> (Okayama University<sup>1)</sup>, and Okazaki National Research Institutes, National Institute for Basic Biology<sup>2)</sup>)
- P-27 Application of CGH and SNP arrays for chromosome analysis  
Yang Luan<sup>1)</sup>, Masamitsu Honma<sup>2)</sup>, Suresh Thiruppathi<sup>1)</sup>, Mieko Kogi<sup>1)</sup>, Teruhide Yamaguchi<sup>1)</sup>, Takayoshi Suzuki<sup>1)</sup> (NIHS, Div. of Cellular and Gene Therapy Products<sup>1)</sup>, NIHS, Div. of Genetics and Mutagenesis<sup>2)</sup>, Kanazawa Institute of Technology<sup>3)</sup>)
- P-28 Urinary 8-OHdG excretion velocity is an effective indicator for systemic oxidative DNA damage  
Y Matsumoto, Y Ogawa, R Yoshida (National Institute of Industrial Health, Kanagawa)
- P-29 Characterization of the products from UVA irradiated *N*-nitrosoproline with deoxyguanosine  
M Machida<sup>1)</sup>, K Okamoto<sup>1)</sup>, S Ishikawa<sup>2)</sup>, M Mochizuki<sup>2)</sup>, S Arimoto-Kobayashi<sup>1)</sup> (Okayama Univ.<sup>1)</sup>, Kyoritsu Univ. of Pharmacy<sup>2)</sup>)
- P-30 Site-specific DNA damage induced by purpurin, a natural pigment, with reference to carcinogenesis  
S. Oikawa, A. Fukushima, and S. Kawanishi (Mie University Graduate School of Medicine)

- P-31 Mismatching events during DNA synthesis past 2'-deoxyxanthosine and 8-nitro-2'-deoxyguanosine, nitric oxide-induced DNA adducts, by DNA polymerases.  
M Yasui<sup>1,2</sup>, N Suzuki<sup>2</sup>, N E Geacintov<sup>3</sup>, V Shafirovich<sup>3</sup>, H Miller<sup>2</sup>, S Matsui<sup>4</sup>, T Matsuda<sup>4</sup>, and S Shibutani<sup>2</sup> (Age Dimension Res Ctr at AIST<sup>1</sup>, State Univ. of New York at Stony Brook<sup>2</sup>, New York Univ.<sup>3</sup>, Kyoto Univ.<sup>4</sup>)
- P-32 Study on rat *in vivo* comet assay treated with CPA, DMBA or MMS.  
Y Kizaki, H Sumida, Y Yamamoto and J Kawahara (KIRIN BREWERY Co., Ltd. Pharmaceutical Development Laboratories)
- P-33 Structural analysis of DNA adducts formed from *N*-nitrosotaurocholic acid (NO-TCA).  
Y Totsuka<sup>1</sup>, R Nishigaki<sup>1</sup>, S Enomoto<sup>1</sup>, T Takamura-Enya<sup>1</sup>, K Masumura<sup>2</sup>, T Nohmi<sup>2</sup>, T Sugimura<sup>1</sup>, and K Wakabayashi<sup>1</sup> (Natl Cancer Centr Res Inst<sup>1</sup>, NIHS<sup>2</sup>)
- P-34 Oxidative DNA damage induced by carcinogenic aromatic amines, *o*-anisidine and *o*-dianisidine  
Y Hiraku, H Note and S Kawanishi (Mie University Graduate School of Medicine)
- P-35 4-Oxo-2-Hexenal as a novel lipid peroxide product: mutagenicity, DNA adduct formation and presence in human diet  
K. Kawai<sup>1</sup>, M. Maekawa<sup>1</sup>, S. Matsui<sup>2</sup>, T. Matsuda<sup>2</sup>, Y. Takahashi<sup>3</sup>, H. Nakamura<sup>3</sup>, R. Sawa<sup>3</sup> and H. Kasai<sup>1</sup> (Univ. of Occup. Environ. Health<sup>1</sup>, Kyoto Univ.<sup>2</sup>, Microbiol Chem. Res. Cent.<sup>3</sup>)
- P-36 Analyses of 8-OH-dG and 8-OH-Gua as markers of oxidative stress  
H. Kasai<sup>1</sup>, P. Svoboda<sup>1</sup>, K. Kawai<sup>1</sup>, M. Irie<sup>2</sup> (Dept. of Environ. Oncol., Univ. of Occup. Environ. Health<sup>1</sup>, Inst. of Health Sci., Kyushu Univ.<sup>2</sup>)
- P-37 LC/ESI-MS/MS analysis of adducts formed in the reaction of 2-chloro-4-methylthiobutanoic acid with nucleosides  
A Segawa<sup>1</sup>, T Watanabe<sup>1</sup>, H Hayatsu<sup>2</sup>, S Arimoto-Kobayashi<sup>3</sup>, and S Kimura<sup>1</sup> (University of Hyogo<sup>1</sup>, Shujitsu University<sup>2</sup>, Okayama University<sup>3</sup>)
- P-38 Analysis of DNA adducts formed with cholyl adenylate, a putative intermediate for biosynthesis of cholyl-CoA.  
T Takamura-Enya<sup>1</sup>, N Mano<sup>2</sup>, N Kawahara<sup>3</sup>, J Goto<sup>2,4</sup>, K Wakabayashi<sup>1</sup> (National Cancer Center Research Institute<sup>1</sup>, Tohoku University<sup>2</sup>, National Institute of Health Sciences<sup>3</sup>, Tohoku University Hospital<sup>4</sup>)
- P-39 Quantitative detection of  $\gamma$ -radiation-induced DNA double-strand breaks using  $\gamma$ -H2AX foci in mouse organs, lymphocytes and *scid* lymphoma cell line  
H Nakajima, R Kikuya, T Nomura and K Ohtani (Osaka Univ.)
- P-40 Protective effect of ascorbic acid against double-strand breaks in reconstituted chromatin visualized by single-molecule observation  
Y. Yoshikawa<sup>1</sup>, Y. Oda<sup>1</sup>, K. Hizume<sup>2</sup>, K. Takeyasu<sup>2</sup>, S. Araki<sup>2</sup> (Nagoya Bunri College<sup>1</sup>, Kyoto Univ.<sup>2</sup>)
- P-41 Characterization of adducts formed in the reaction of 2-chloro-4-methylthiobutanoic acid with 2'-deoxyguanosine  
S Kimura<sup>1</sup>, M Nakayama<sup>1</sup>, T Hatano<sup>2</sup>, A Segawa<sup>1</sup>, T Watanabe<sup>1</sup>, H Hayatsu<sup>3</sup> and S Arimoto-Kobayashi<sup>2</sup> (University of Hyogo<sup>1</sup>, Okayama University<sup>2</sup>, Shujitsu University<sup>3</sup>)
- P-42 Role of nitrate and oxidative DNA damage in urinary bladder carcinogenesis induced by infection with *Schistosoma haematobium*  
Hatasu Kobayashi<sup>1</sup>, Yusuke Hiraku<sup>1</sup>, Ning Ma<sup>2</sup>, Shinji Oikawa<sup>1</sup>, Mariko Murata<sup>1</sup> and Shosuke Kawanishi<sup>1</sup> (Department of Environmental and Molecular Medicine<sup>1</sup> and Department of Anatomy<sup>2</sup>, Mie Univ.)
- P-43 Analysis of DNA adducts formed from chloropropyl nitrosamine  
S Ishikawa, M Hatanaka, R Odamaki and M Mochizuki (Kyoritsu Univ Pharm)
- P-45 Further improvement of high-throughput fluctuation Ames test (FAT): the effects of *dinB* plasmid (IV)  
H Sui<sup>1</sup>, K Kawakami<sup>1</sup>, N Ohya<sup>1</sup>, T Hara<sup>1</sup>, T Nohmi<sup>2</sup> (Hatano Research Institute, Food and Drug Safety Center<sup>1</sup>, National Institute of Health Sciences<sup>2</sup>)

- P-46 The cytotoxic effect of dimethyl sulfoxide is a factor influencing the sensitivity and accuracy of the Ames test system  
T Sugihara<sup>1</sup>, A Hakura<sup>2</sup>, Y Hori<sup>1</sup>, K Uchida<sup>2</sup>, S Sawada<sup>2</sup> (Research Support Department, Sunplanet Co. Ltd<sup>1</sup>, Drug Safety Research Laboratories, Eisai Co. Ltd<sup>2</sup>)
- P-47 Establishment of the yeast assay system that can measure estrogenic activity of environmental dioxins  
M Kondo, M Kawanishi, T Yagi (Frontier Science Innovation Center, Osaka Prefecture University)
- P-48 Optimal Condition of Metabolic Activation in Mouse Lymphoma Assay  
M Asakura, C Ishioka, T Sasaki, T Sugiyama and T Matsushima (Japan Bioassay Research Center, Japan Industrial Safety and Health Association)
- P-49 Detection of NTP selection compounds and organic solvents using *umu*-test kit (II).  
S Yumoto<sup>1</sup>, T Saitou<sup>1</sup>, Y Oda<sup>2</sup>, K Kanatani<sup>1</sup> (JIMRO Co. Ltd<sup>1</sup>, Osaka Prefectural Institute of Public Health<sup>2</sup>)
- P-50 On-chip bioluminescence reporter assay for genotoxic substances using three-dimensional microfluidic network  
H Tani, K Maehana, T Kamidate (Hokkaido Univ)

## Poster Presentations (2) Thursday, November 17 (9:30~11:00)

ダイヤモンド

- P-51 Detection of in vitro genotoxicity of aromatic amines using the comet assay under human and rat liver S9 fractions  
A Matsui, S. Kawaguchi and YF Sasaki (Hachinohe National College of Technology)
- P-52 Detection of in vitro genotoxicity of aromatic amines using HepG2 cells  
R Fusama, A Matsui, S. Kawaguchi and YF Sasaki (Hachinohe National College of Technology)
- P-53 Isolation of antimutagenic factor(s) in the edible mushroom *Agrocybe cylindracea*  
A. Shiozawa, K. Taira, S. Arimoto, K. Okamoto, T. Negishi (Okayama Univ.)
- P-54 Evaluation of the inhibitory effects of food components on genotoxicity of chemicals by Ames test.  
M Horiguchi<sup>1</sup>, S Aoe<sup>1</sup>, C Tanaka<sup>1</sup>, H Tutuki<sup>1</sup>, M Yamada<sup>2</sup>, K Matui<sup>2</sup>, T Nohmi<sup>2</sup>, S Ikegami<sup>1</sup> (Otsuma Women's Univ.<sup>1</sup>, NIHS<sup>2</sup>)
- P-55 Enhanced radical-scavenging activities and cell growth inhibitions of planar catechin analogues having alkyl side chains  
K Fukuhara<sup>1</sup>, I Nakanishi<sup>2,3</sup>, Y Kawamura<sup>4</sup>, T Kawashima<sup>2,3,5</sup>, H Kanazawa<sup>5</sup>, S Urano<sup>4</sup>, T Ozawa<sup>2</sup>, N Ikota<sup>2</sup>, A Ishii<sup>1</sup>, N Kawasaki<sup>1</sup>, T Kawanishi<sup>1</sup>, N Miyata<sup>6</sup> and H Okuda<sup>1</sup> (NIHS<sup>1</sup>, NIRS<sup>2</sup>, Osaka Univ., SORST, JST<sup>3</sup>, SIT<sup>4</sup>, Kyoritsu Univ. of Pharmacy<sup>5</sup>, Nagoya City Univ.<sup>6</sup>)
- P-56 Mutational property of 8-hydroxy-dGTP during DNA replication by cellular extract lacking DNA polymerase  $\epsilon$   
H Kamiya<sup>1</sup>, K Satou<sup>1</sup>, H Harashima<sup>1</sup>, C Masutani<sup>2</sup> and F Hanaoka<sup>3</sup> (Hokkaido Univ.<sup>1</sup>, Osaka Univ.<sup>2</sup>)
- P-57 Cell transformation by telomeric destabilization induced in a high density culture  
Masami Watanabe, Hanako Yoshii, Atsushi Maruo, Mio Morimoto, Kimiko Watanabe (Radiat. Life Sci., Res. React. Instit., Kyoto Univ.)
- P-58 Comparison of automated image analysis and manual methods for the in vitro micronucleus test  
K Kanda<sup>1</sup>, A Matsuoka<sup>2</sup>, W Uda<sup>1</sup> (Youworks Corp.<sup>1</sup>, NIHS<sup>2</sup>)
- P-59 Comparative characteristics of *in vitro* micronucleus test and conventional chromosomal aberration test in CHL cells  
A Hanamoto, Y Hayasaki, S Itoh and K Furuhashi (Drug Safety Research Laboratory, Daiichi Pharmaceutical Co., LTD.)
- P-60 Induction of chromosome aberrations by a combination of sodium nitrite and antioxidants in cultured Chinese hamster cells  
K Matsumoto, M Abe, K Wada, Y Takezawa (Institute of Environmental Toxicology)
- P-61 Evaluation of negative specificity of the *in vitro* micronucleus test using CHL/IU cells  
E. Yamamura, M. Nakamaru, H. Baba and Y. Uno (Toxicology Laboratory, Mitsubishi Pharma Corporation)
- P-62 Establishment of a photogenotoxicity screening assay system using a simplified *in vitro* micronucleus test  
A Harada, A Takeiiri, M Mishima, K Tanaka, A Shioda, and K Watanabe (Fuji Gotemba Research Labs., Chugai Pharm. Co., Ltd.)
- P-63 Effects of electromagnetic fields exposure on the induction of micronuclei in rat astrocytes (3rd report)  
Yuichi MIYAKOSHI, Yuji SUZUKI and Hidesuke SHIMIZU (Department of Public Health and Environmental Medicine, The Jikei University School of Medicine)
- P-64 Photo skin micronucleus test  
T Hara<sup>1</sup>, H Sui<sup>1</sup>, K Kawakami<sup>1</sup>, H Matsumoto<sup>1</sup>, T Nishikawa<sup>2</sup> and N Tanaka<sup>1</sup> (Hatano Research Institute, Food and Drug Safety Center<sup>1</sup>, Human Safety Evaluation Center, LION<sup>2</sup>)

- P-65 Hepatocyte micronucleus assay in young rats: comparison of 2 strains  
H Suzuki<sup>1</sup>, I Ogawa<sup>2</sup>, Y Terashima<sup>3</sup>, Y Shimada<sup>4</sup>, Y Saito<sup>5</sup>, J Tanaka<sup>6</sup>, and M Hayashi<sup>7</sup> (Ina Research Inc.<sup>1</sup>, Nissan Chemical Industries Ltd.<sup>2</sup>, Kissei Pharmaceutical Co.,Ltd.<sup>3</sup>, Hokko Chemical Industry Co.,Ltd.<sup>4</sup>, Mitsubishi Chemical Safety Institute Ltd.<sup>5</sup>, Biosafety Research Center, Foods, Drugs and Pesticides<sup>6</sup>, NIES<sup>7</sup>)
- P-66 Nature of micronuclei induced in reticulocytes of *p53*-null mice after radiation, a preliminary report  
N Kagawa<sup>1</sup>, H Kasanami<sup>2</sup>, Y Noda<sup>3</sup>, K Tatsumi<sup>3</sup>, T Norimura<sup>4</sup>, K Fujikawa<sup>1,2</sup> (Kinki Univ<sup>1</sup>, Interdisciplinary Grad Sch Kinki Univ<sup>2</sup>, NIRS<sup>3</sup>, UOEH<sup>4</sup>)
- P-67 Changes in the mutagenic and estrogenic activities of 17 $\beta$ -estradiol upon treatment with nitrite  
S Masuda, Y Terashima, Y Deguchi, M Okada, T Toyozumi, N Wu, M Kamihira, S Kumazawa, H Yoshioka and N Kinai (Graduate School of Nutritional and Environmental Sciences and COE program in the 21st century, University of Shizuoka)
- P-68 Evaluation of flow cytometric analysis for micronucleus induction in mouse peripheral blood using MicroFlow™ Kit  
S Muto, H Daigo, E Yamamura, H Baba, Y Uno (Mitsubishi Pharma Corporation)
- P-69 Sex-related difference in the liver micronucleus assay using young rats  
Izumi Ogawa, Satoshi Furukawa, Masayoshi Abe, Yoshinori Tanaka, Koji Usuda (NISSAN CHEMICAL INDUSTRIES, LTD.)
- P-70 A possible mechanism for the enhancement by co-exposure to static magnetic fields of micronucleus formation by mutagens  
Y Suzuki<sup>1</sup>, M Ikehata<sup>2</sup>, Y Miyakoshi<sup>1</sup> and H Shimizu<sup>1</sup> (The Jikei Univ. Sch. of Med.<sup>1</sup>, Railway Tech. Res. Inst.<sup>2</sup>)
- P-71 The potentiating action of ethanol on the mutagenic activity of acrylamide  
C Mori, S Masuda, Y Terashima, Y Deguchi, N Koyama and N Kinai (Graduate School of Nutritional and Environmental Sciences and COE program in the 21st century, University of Shizuoka)
- P-72 Induction of micronuclei in gill cells of goldfish by X-irradiation  
Akinori Takai<sup>1</sup>, Kazuo Fujikawa<sup>2</sup> (Osaka Shin-Ai College<sup>1</sup>, Kinki University<sup>2</sup>)
- P-73 Low Dose Effects in the MNRETs Induction by Acridine Orange Supravital Staining and Flow Cytometric Methods  
N. Asano<sup>1</sup>, D. Torous<sup>2</sup>, S. Dertinger<sup>2</sup>, C.Tometsko<sup>2</sup>, T. Morita<sup>3</sup>, M. Hayashi<sup>4</sup>
- P-74 Detection of transiently expressed and unexpressed genes by AraC treatment in human lymphocytes  
K Sekizawa<sup>1</sup> and Y Shima<sup>2</sup> (Department of Cytogenetics<sup>1</sup>, and Biochemistry<sup>2</sup>, School of Health Sciences, Kyorin University)
- P-75 Carcinogen characteristic post-translational modifications detected in the distinct hepatic proteins in a 28-day repeated dose study  
H Yamanaka<sup>1</sup>, Y Sudo<sup>1</sup>, Y Yakabe<sup>1</sup>, K Saito<sup>2</sup>, K Sumida<sup>2</sup>, M Sekijima<sup>3</sup>, K Nakayama<sup>3</sup> and T Shirai<sup>4</sup> (Chemicals Evaluation and Research Institute<sup>1</sup>, Sumitomo Chemical Co.,Ltd.<sup>2</sup>, Mitsubishi Chemical Safety Institute Ltd.<sup>3</sup>, Graduate School of Medical Sciences, Nagoya City Univ.<sup>4</sup>)
- P-76 Toxicogenomic approach to the prediction of carcinogenic potentials of heterocyclic amines in rat colon  
M Ochiai, M Nakanishi, K Fujiwara, T Sugimura and H Nakagama (Biochemistry Div., Natl. Cancer Ctr. Res. Inst.)
- P-77 Development of prediction method of carcinogenicity by characteristic gene expression profiles of mutagenic and non-mutagenic carcinogens.  
Hiroschi Matsumoto<sup>1</sup>, Yoshikuni Yakabe<sup>1</sup>, Masanori Otsuka<sup>1</sup>, Yoshihisa Sudo<sup>1</sup>, Hideki Miyaura<sup>1</sup>, Fumiyo Saito<sup>1</sup>, Kouichi Saito<sup>2</sup>, Kayo Sumida<sup>2</sup>, Masaru Sekijima<sup>3</sup>, Kouji Nakayama<sup>3</sup>, Makoto Asamoto<sup>4</sup> and Tomoyuki Shirai<sup>4</sup> (Chemicals Evaluation and Research Institute, Tokyo, Japan<sup>1</sup>, Sumitomo Chemical Co., Ltd., Osaka, Japan<sup>2</sup>, Mitsubishi Chemical Safety Institute Ltd., Ibaraki, Japan<sup>3</sup>, Graduate School of Medical Sciences, Nagoya City Univ., Nagoya<sup>4</sup>)

- P-78 Comparative study of siRNA expression vectors and target vectors associated with RNA interference  
S Sutou<sup>1,2</sup>, M Kunishi<sup>1</sup>, and T Kudo<sup>1</sup> (School of Pharm., Shujitsu Univ.<sup>1</sup>, iGENE Therapeutics, Inc.<sup>2</sup>)
- P-79 Dose-dependent changes in gene expression induced by diethylnitrosamine and ethylnitrosourea in mouse liver determined by quantitative RT-PCR  
T Watanabe<sup>1</sup>, M Hirayama<sup>1</sup>, S Hamada<sup>2</sup>, C Namiki<sup>3</sup>, M Nakajima<sup>4</sup>, T Suzuki<sup>5</sup> and C Furihata<sup>1</sup> (Aoyama Gakuin Univ.<sup>1</sup>, Mitsubishi Chem. Safety Inst. LTD.<sup>2</sup>, SSP Co. Ltd<sup>3</sup>, Biosafety Res. Cent., Foods, Drugs, and Pesticides<sup>4</sup>, NIHS<sup>5</sup>) (JEMS/MMS/Toxicogenomics Collaboration Group))
- P-80 Effects of chlorinated polycyclic aromatic hydrocarbons on estrogen metabolism –AhR activation and gene expression of CYP1A1/1B1–  
N Uchifune, T Ohura, M Terasaki, M Makino, T Amagai, R Kuruto and K Shimoi (Grad. Sch. Nutr. Environ. Sci., Univ. of Shizuoka)
- P-81 Effect of inflammation on gene expressions of drug metabolizing enzymes in mouse liver  
M Iwatsuka<sup>1</sup>, K Shimoi<sup>2</sup>, T Mizutani<sup>1</sup>, K Takahashi<sup>1</sup> (Grad. Sch. Pharm. Sci., Nagoya City Univ.<sup>1</sup>, Grad. Sch. Nutr. Environ. Sci., Univ. Shizuoka<sup>2</sup>)
- P-82 DNA microarray-based gene expression profile induced by non-genotoxic carcinogens in mouse liver  
T Miura<sup>1</sup>, Y Luan<sup>2</sup>, K Tobe<sup>1</sup>, Y Nakachi<sup>3</sup>, Y Kondo<sup>3</sup>, T Suzuki<sup>2</sup>, H Tashiro<sup>3</sup>, C Furihata<sup>1</sup> (Aoyama Gakuin Univ.<sup>1</sup>, NIHS<sup>2</sup>, RIKEN<sup>3</sup>)
- P-83 Collaborative study on the toxicogenomics in JEMS/MMS: Quantitative RT-PCR analysis on the selected genes by the GeneChip  
T Suzuki, Y Luan, G Tanaka, M Nakajima, S Hamada, T Miura and C Furihata (The Collaborative Study Group on Toxicogenomics in JEMS/MMS)
- P-84 Identification of major mutagens in surface soil in Osaka and Aichi prefectures  
T Watanabe<sup>1</sup>, T Hasei<sup>1</sup>, M Asanoma<sup>2</sup>, K Wakabayashi<sup>3</sup>, T Hirayama<sup>1</sup> (Kyoto Pharmaceutical University<sup>1</sup>, Nagoya City Public Health Research Institute<sup>2</sup>, National Cancer Center Research Institute<sup>3</sup>)
- P-85 Quantification of 3,6-dinitrobenzo[e]pyrene in airborne particles and surface soils  
T Hasei, T Watanabe, T Hirayama (Kyoto Pharmaceutical University)
- P-86 Transformation activities of acrylamide and glycidamide in Bhas 42 cells  
Kiyomi Ohmori (Kanagawa Prefectural Institute of Public Health)
- P-87 Analysis of *N*-nitroso-bis(2-oxopropyl)amine (BOP) and its metabolites in pancreatic juice of Syrian golden hamsters treated with BOP  
R Nishigaki<sup>1</sup>, Y Totsuka<sup>1</sup>, Y Mori<sup>2</sup>, K Masumura<sup>3</sup>, T Nohmi<sup>3</sup>, T Sugimura<sup>1</sup> and K Wakabayashi<sup>1</sup> (Natl. Cancer Ctr. Res. Inst.<sup>1</sup>, Gifu pharm. Univ.<sup>2</sup>, NIHS<sup>3</sup>)
- P-88 Toxic evaluation of leachate from landfill site by using several biomarkers on goldfish  
Y Deguchi<sup>1</sup>, T Toyozumi<sup>1</sup>, S Masuda<sup>1</sup>, N Wu<sup>1</sup>, A Yasuhara<sup>2</sup>, S Mohri<sup>3</sup>, M Yamada<sup>2</sup>, Y Inoue<sup>2</sup>, N Kinai<sup>1</sup> (Graduate School of Nutritional and Environmental Sciences, and COE program in the 21th century, University of Shizuoka<sup>1</sup>, Research Center for Material Cycles and Waste Management, National Institute for Environmental Studies<sup>2</sup>, Department of Environmental and Civil Engineering, Okayama University<sup>3</sup>)
- P-89 Mutagenicity of soils collected at children's parks in Kawasaki  
O Endo<sup>1</sup>, M Koyano<sup>1</sup>, D Nakajima<sup>2</sup>, S Goto<sup>2</sup>, T Watanabe<sup>3</sup>, Y Takagi<sup>4</sup> and K Kohzaki<sup>4</sup> (NIPH<sup>1</sup>, NIES<sup>2</sup>, Kyoto Pharmaceutical Univ.<sup>3</sup>, Azabu Univ.<sup>4</sup>)
- P-90 Identification of mutagens in river water in Central Japan area  
M Asanoma<sup>1</sup>, H Terada<sup>1</sup>, Y Tamura<sup>1</sup>, K Takahashi<sup>2</sup>, T Watanabe<sup>3</sup>, T Hirayama<sup>3</sup>, Y Terao<sup>4</sup>, T Shiozawa<sup>4</sup>, H Nukaya<sup>4</sup>, T Takamura<sup>5</sup> and K Wakabayashi<sup>5</sup> (Nagoya City Pub. Health Res. Inst.<sup>1</sup>, Grad. Sch. Pharm. Sci., Nagoya City Univ.<sup>2</sup>, Kyoto Pharm. Univ.<sup>3</sup>, Univ. Shizuoka<sup>4</sup>, Natl. Cancer Center Res. Inst.<sup>5</sup>)
- P-91 Cancer initiation activity of benzophenone derivatives  
D Nakajima, R Ishii, S Kageyama, T Yamamoto, and S Goto (National Institute for Environmental Studies)

- P-92 Examination of mutagenicity test on dust content sample  
Kenji Takeshita, Naomi Matsunaga, Ayako Akiyama, Junichi Hashimoto, Yukihiro Noguchi, and Toru Ogawa (Ube Scientific Analysis Laboratory, Inc)
- P-93 Isolation of mutagenic component derived from maltol with UV irradiation  
M Tsunoda<sup>1</sup>, D Nakajima<sup>1</sup>, H Kuramochi<sup>1</sup>, S Goto<sup>1</sup>, M Watanabe-Akanuma<sup>2</sup> and T Ohta<sup>3</sup> (National Institute for Environmental Studies<sup>1</sup>, Kureha Chemical Ind., Co. Ltd.<sup>2</sup>, Tokyo Univ. Pharm. & Life Sci.<sup>3</sup>)
- P-94 Identification of the major mutagens in surface soil of Nagoya, Japan  
N Gao<sup>1</sup>, S Yoshida<sup>1</sup>, M Asanoma<sup>2</sup>, T Uchiyama<sup>3</sup>, S Miyairi<sup>3</sup>, T Watanabe<sup>4</sup>, T Hirayama<sup>4</sup>, H Nukaya<sup>5</sup>, T Mizutani<sup>1</sup> and K Takahashi<sup>1</sup> (Nagoya City Univ.<sup>1</sup>, Nagoya City Health Res. Inst.<sup>2</sup>, Nihon Univ.<sup>3</sup>, Kyoto Pharmacology Univ.<sup>4</sup>, Univ. of Shizuoka<sup>5</sup>)
- P-95 Effect of nicotine on mutagenic activation of heterocyclic amines by hepatic cytochrome P-450 1A2 in rats and hamsters  
Y Mori<sup>1</sup>, K Tatematsu<sup>1</sup>, A Nishikawa<sup>2</sup>, T Umemura<sup>2</sup> and M Hirose<sup>2</sup> (Gifu Pharmaceutical Univ.<sup>1</sup>, NIHS<sup>2</sup>)
- P-96 Enhancement by naphthoflavone of cytochrome P450 1A, mutagenic activation of heterocyclic amines and UDP-glucuronidation in rat liver  
Y Mori<sup>1</sup>, K Tatematsu<sup>1</sup>, S Sugie<sup>2</sup>, T Tanaka<sup>2</sup> and H Mori<sup>3</sup> (Gifu Pharmaceutical Univ.<sup>1</sup>, Kanazawa Medical Univ.<sup>2</sup>, Graduate School of Med., Gifu Univ.<sup>3</sup>)
- P-97 Computerized prediction system of mutagenicity of organic compounds by application of classification decision tree  
K Sawatari<sup>1</sup>, T Matsushima<sup>2</sup> (National Institute of Industrial Health<sup>1</sup>, Japan Bioassay Research Center<sup>2</sup>)
- P-98 Classification of germ cell mutagens for GHS  
T. Morita<sup>1</sup>, T. Sofuni<sup>2</sup>, M. Hayashi<sup>1</sup>, N. Tanaka<sup>3</sup>, M. Nakajima<sup>4</sup>, Y. Nakanishi<sup>5</sup>, M. Higuchi<sup>6</sup>, S. Ishimitsu<sup>1</sup>, Y. Kojima<sup>1</sup>, S. Sasaki<sup>1</sup>, K. Morikawa<sup>1</sup> (NIHS<sup>1</sup>, CIEA<sup>2</sup>, FDSC<sup>3</sup>, Bio-safety Res. Ctr.<sup>4</sup>, NIIH<sup>5</sup>, MHLW<sup>6</sup>)
- P-99 Strategy for *in silico* evaluation of chemical genotoxicity  
A Hirose, E Kamata, M Takahashi, T Morita, M Ema and M. Hayashi (National Institute of Health Sciences)
- P-100 Specificity of replicative and SOS-inducible DNA polymerases in frameshift mutagenesis: Mutability of *Salmonella typhimurium* strains overexpressing SOS-inducible DNA polymerases to 30 chemical mutagens  
K Matsui<sup>1</sup>, M Yamada<sup>1</sup>, M Imai<sup>2</sup>, K Yamamoto<sup>2</sup>, and T Nohmi<sup>1</sup> (NIHS<sup>1</sup>, Grad. Sch. Life Sci. Tohoku Univ.<sup>2</sup>)
- P-101 Genotoxicity of antioxidant flavonoids and their oxidative products in human lymphoblastoid TK6 cells  
H. Matsufuji<sup>1</sup>, M. Inoue<sup>1</sup>, M. Chino<sup>1</sup>, M. Honma<sup>2</sup>, M. Hayashi<sup>2</sup> and K. Yamagata<sup>1</sup> (Nihon Univ.<sup>1</sup>, NIHS<sup>2</sup>)
- P-102 Enzymatic formation of 4-methylthio-3-butenyl isothiocyanate, a possible pancreatic cancer preventive agent originated in daikon (*Raphanus sativus*)  
Y Nakamura<sup>1</sup>, K Nakamura<sup>1</sup>, Y Asai<sup>1</sup>, T Wada<sup>2</sup>, K Tanaka<sup>3</sup>, T Matsuo<sup>3</sup>, S Okamoto<sup>3</sup>, A Nishikawa<sup>4</sup>, K Sato<sup>1</sup>, K Ohtsuki<sup>1</sup> (Kyoto Prefectural Univ.<sup>1</sup>, Kyoto Prefectural Agricultural Research Institute<sup>2</sup>, Kagoshima Univ.<sup>3</sup>, NIHS<sup>4</sup>)