

December 7 (Sat)

8:15

Door Open

8:45 – 9:00 (S Building S102/S101)

Opening Remarks

Masahiko WATANABE
President, JEMS 53rd Annual Meeting
Shujitsu University

9:00 – 10:45 (S Building S102/S101)

Symposium 1 **Promising Studies on Genome Safety: Detection, Analysis and Mechanisms**

Chairs: Atsushi HAKURA (Global Drug Safety, Eisai Co., Ltd.)
Kei-ichi SUGIYAMA (Division of Genome Safety Science, National Institute of Health Sciences)

Introduction 9:00

S1-1 9:02 **Current status of and future prospects for the ecNGS-based mutagenicity evaluation method**
Shoji MATSUMURA
R&D, Safety Science Research, Kao Corporation

S1-2 9:28 **Mechanism of DNA double-strand break repair and mutagenesis**
Masataka TSUDA
Division of Genome Safety Science, National Institute of Health Sciences

S1-3 9:54 **Possible involvement of chromothripsis in chemical carcinogenesis**
Yuji ISHII
Division of Pathology, National Institute of Health Sciences

S1-4 10:20 **Induction mechanism of epimutations and their characteristics compared with mutations**
Toshikazu USHIJIMA¹, Naoko HATTORI^{1,2}
¹Hoshi University, ²Gunma University

プログラム

Program

受賞講演

招待講演

特別講演

シンポジウム

一般口演

ポスター

研究会/定例会

ワークショップ

人名索引

11:00 – 12:00 < S Building S102/S101>

Oral Session 1

Presentation 7 min, Discussion 2 min, Speaker change 1 min

Chairs: Emiko OKADA (Yakult Central Institute for Microbiological Research)
 Megumi SASATANI (Department of Experimental Oncology, RIRBM, Hiroshima University)

O-1 11:00 **NADH and copper-mediated oxidative DNA damage induced by rosmarinic acid**
 (P-17) Hatasu KOBAYASHI¹, Yuichiro HIRAO^{1,2}, Shosuke KAWANISHI³, Shinya KATO⁴,

Yurie MORI¹, Mariko MURATA^{1,5}, Shinji OIKAWA¹

¹Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine,

²Mie Prefectural College of Nursing,

³Faculty of Pharmaceutical Science, Suzuka University of Medical Science,

⁴Radioisotope Experimental Facility, Advanced Science Research Promotion Center, Mie University,

⁵Faculty of Nursing, Suzuka University of Medical Science

O-2 11:10 **Characterization of Bhas42 cells transformed by different chemicals**
 (P-23) Toshinori MIURA, Naoteru DENTA, Masaki NAKAGAWA, Masashi SEKIMOTO
 Environmental Health Sciences Laboratory

O-3 **Withdrawal**

O-4 11:20 **Formation of DNA double strand breaks after coexposure to UVA1 and UVB was associated with Mre11**
 (P-43) Mai NARIMICHI, Yukako KOMAKI, Yuko IBUKI
 Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka

O-5 11:30 **Establishment of mice with complete human mutations that lack formaldehyde-metabolizing enzymes and their phenotypes**
 (P-51) Yoshihiro TAMAKI¹, Jun NAKAMURA², Aya KAWAI¹, Kazunori SHIRAISHI¹,
 Toshiya OKADA², Masanobu KAWANISHI¹
¹Laboratory of Environmental Molecular Toxicology, Graduate School of Science, Osaka Metropolitan University,
²Graduate School of Veterinary Sciences, Osaka Metropolitan University

O-6 11:40 **Elucidating the Relationship between Environmental Factors and Human Cancer Development Using Next Generation Sequencers**
 (P-57) Yukari TOTSUKA¹, Momoko NAGAI², Mamoru KATO²
¹Department of Environmental Health Sciences, Hoshi University,
²Division of Bioinformatics, National Cancer Center Research Institute

13:15 – 14:00 < S Building S102/S101>

General Meeting & Awards Ceremony

14:00 – 15:15 < S Building S102/S101>

Award Lecture

Chair: Tomonari MATSUDA (Graduate School of Engineering, Kyoto University)

JEMS Award 2024

- AW 14:00** **Elucidation of mutation mechanisms using newly constructed Ames tester strains and contribution to the internationalization of the journal Genes and Environment**
Masami YAMADA
 Department of Applied Chemistry, National Defense Academy

JEMS Service Award 2024

- SA 14:20** **Development of Rodent Gastrointestinal Micronucleus Test and Contribution to its International Standardization**
Wakako OHYAMA
 Yakult Central Institute, Yakult Honsha Co., Ltd.

JEMS Encouragement Award 2024

- EA-1 14:40** **Studies on de novo germline mutations using whole genome sequencing**
Arikuni UCHIMURA
 Department of Molecular Biosciences, Radiation Effects Research Foundation

JEMS Encouragement Award 2024

- EA-2 14:55** **Investigation of DNA damage Induced by chemicals using γ-H2AX as a indicator**
Tatsushi TOYOOKA
 National Institute of Occupational Safety and Health, Japan

15:30 – 17:15 < S Building S102/S101>

Symposium 2 The New Era Shaped by Environmental Genome Monitoring

Chairs: Natsuko KONDO (Biodiversity Division, National Institute for Environmental Studies)
 Hiroshi HONDA (R&D Human Health Care, Kao Corporation)

Introduction 15:30

- S2-1 15:35** **Metagenomic Analysis of River Water for Bacterial Flora and Drug Resistance Genes**
Takayoshi SUZUKI¹, Kahoko NISHIKAWA²
¹Division of Genome Safety Science, National Institute of Health Sciences, ²Faculty of Commerce

- S2-2 15:55** **Wastewater-based Epidemiology: Development and Social Implementation of Highly Sensitive Pathogen Genome Detection Technologies in the Environment**
Masaaki KITAJIMA
 Research Center for Water Environment Technology, School of Engineering, The University of Tokyo

- S2-3 16:15** **Using biodiversity information through environmental DNA analysis and its challenges**
Natsuko I. KONDO
 National Institute for Environmental Studies

- S2-4 16:35** **The Utility of Environmental RNA for Assessment of Biodiversity and Stress Response Analysis**
Kaede MIYATA
 Kao Corporation

- S2-5 16:55 **Perpetual, reciprocal dynamics of ecology and evolution in the wild**
Shunsuke UTSUMI^{1,2}, Fugen OHKUMA², Naoki SHIMAMOTO², Kinuyo YONEYA³
¹Faculty of Environmental Earth Science, Hokkaido University,
²Graduate School of Environmental Science, Hokkaido University,
³Faculty of Agriculture, Kindai University

17:15 – 18:30 〈S Building S-Commons〉

Poster Session Core time for odd numbers

19:15 – 21:15 〈Okayama Plaza Hotel〉

Banquet

8:15

Door Open

8:45 – 9:45 (S Building S102/S101)

Oral Session 2

Presentation 7 min, Discussion 2 min, Speaker change 1 min

Chairs: Akira SASSA (Graduate School of Science, Chiba University)
Shun MATSUDA (Graduate School of Engineering, Kyoto University)

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|-----------------------|------|--|
| O-7
(P-02) | 8:45 | Analysis of double-strand DNA breaks in placental organoids
<u>Katsuhiro HANADA</u> ¹ , Yoshihiro NISHIDA ²
¹ Department of Advanced Medicines, Faculty of Medicine, Oita University,
² Department of Obstetrics and Gynecology, Faculty of Medicine, Oita University |
| O-8
(P-10) | 8:55 | Effect of circadian rhythm disruption induced by time-restricted feeding and exercise on oxidative stress and immune
<u>Yun-Shan LI</u> ^{1,3} , Hiroaki FUJIHARA ² , Koichi FUJISAWA ¹ , Kazuaki KAWAI ¹
¹ Department of Environmental Oncology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health,
² Department of Ergonomics, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan,
³ Center for Stress-related Disease Control and Prevention, University of Occupational and Environmental Health, Japan |
| O-9
(P-18) | 9:05 | Mutations on plasmid DNA irradiated with carbon ion beams
<u>Hiroaki TERATO</u> ¹ , Yuka TOKUYAMA ² , Kanae MORI ² , Midori ISOBE ¹
¹ Advanced Science Research Center, Okayama University,
² Analytical Research Center for Experimental Sciences, Saga University |
| O-10
(P-36) | 9:15 | Repair mechanisms and biological effects of DNA damage caused by endogenous mutagene formaldehyde
<u>Yasuyoshi OKA</u> , Tomoo OGII
Department of Genetics, Research Institute of Environmental Medicine, Nagoya University |
| O-11
(P-40) | 9:25 | Impact of dysregulation of fatty aldehyde metabolism on genome stability
<u>Wataru SAKAI</u> ^{1,2} , Tomoya HOTANI ^{1,2} , Taketoshi KAJIMOTO ³ , Taro OKADA ³ ,
Masakazu SHINOHARA ³ , Masayuki YOKOI ^{1,2} , Kaoru SUGASAWA ^{1,2}
¹ Biosignal Research Center, Kobe University, ² Graduate School of Science, Kobe University,
³ Graduate School of Medicine, Kobe University |
| O-12
(P-74) | 9:35 | The induction of cytokines related to allergy in alveolar epithelial cells by oxygenated polycyclic aromatic hydrocarbons
<u>Kentaro MISAKI</u> ¹ , Takeji TAKAMURA ² , Hirohisa TAKANO ^{3,4} , Ken-ichiro INOUE ¹
¹ School of Nursing, University of Shizuoka,
² Department of Applied Chemistry, Kanagawa Institute of Technology,
³ Institute for International Academic Research, Kyoto University of Advanced Science,
⁴ Graduate School of Global Environmental Studies, Kyoto University |

9:45 – 10:30 (S Building S102/S101)

Invited Lecture

Chair: Masamitsu HONMA (National Institute of Health Sciences)

- IL 9:45** **Regulations and current status of radioactive materials in food in Japan after the Fukushima Daiichi nuclear power plant accident; review of research data from the 13 years since the accident**
Hiromi NABESHI
Division of Foods, National Institute of Health Sciences

10:30 – 11:45 (S Building S-Commons)

Poster Session Core time for even numbers

13:15 – 15:15 (S Building S102/S101)

Symposium 3 Potential for Computational Genotoxicity

Chairs: Naoki KOYAMA (Chugai Pharmaceutical Co., Ltd.)
Ayako FURUHAMA (Division of Genome Safety Science, National Institute of Health Sciences)

- S3-1 13:15** **Potential for Computational Genotoxicity**
Naoki KOYAMA
Safety and Bioscience Research Dept. Chugai Pharmaceutical Co., Ltd.
- S3-2 13:32** **US FDA Experience in the Regulatory Application of (Q)SAR**
Naomi Louise KRUHLAK
US Food and Drug Administration/Center for Drug Evaluation and Research
- S3-3 14:14** **Toward Fully Automated Genotoxicity Prediction**
Nicolas Ken SHINADA, Sucheendra Kumar PALANIAPPAN
SBX Corporation
- S3-4 14:45** **Importance of domain knowledge in data analysis: ecNGS analysis**
Kazuki IZAWA
Division of Genome Safty Science, National Institute of Health Sciences

15:30 – 16:30 (S Building S102/S101)

Special Lecture

Chair: Tomonari MATSUDA (Graduate School of Engineering, Kyoto University)

- SL 15:30** **From “genotoxicity” to “genometoxicity”**
Masamitsu HONMA
National Institute of Health Sciences

16:30 – 16:45 (S Building S102/S101)

The Best Presentation Awards Ceremony & Closing Remarks

Poster Session

Poster Discussion : [odd number] 2024 December 7 (Sat) 17:15-18:30
[even number] 2024 December 8 (Sun) 10:30-11:45

P-01 Follow-up study of glutathione-supplemented in vitro gene mutation assays in TK6 cells

Manabu YASUI¹, Akiko UKAI¹, Masamitsu HONMA², Kei-Ichi SUGIYAMA¹

¹Division of Genome Safety Science, National Institute of Health Sciences,

²General Affairs Department, National Institute of Health Sciences

P-02 Analysis of double-strand DNA breaks in placental organoids

(O-7)

Katsuhiro HANADA¹, Yoshihiro NISHIDA²

¹Department of Advanced Medicines, Faculty of Medicine, Oita University,

²Department of Obstetrics and Gynecology, Faculty of Medicine, Oita University

P-03 Investigation of cytotoxicity indicators in miniaturized Ames test (Ames MPF assay)

Asami MARUCHI, Ryoko MATSUYAMA, Hiroyuki ASANO

Toxicology Group, Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd.

P-04 Genotoxicity induced in mice lungs by heated tobacco products

Yukari TOTSUKA¹, Rikako ISHIGAMORI¹, Yukie HARA², Akira USHIYAMA³, Yohei INABA³,

Katsuhiro MIYAJIMA⁴, Noriko KEMURIYAMA⁴

¹Department of Environmental Health Sciences, Hoshi University, ²School of Pharmacy, Nihon University,

³Department of Environmental Health, National Institute of Public Health,

⁴Department of Nutritional Science and Food Safety, Tokyo University of Agriculture

P-05 Mutagenesis in higher eukaryotes associated with transcription

Katsuyoshi HORIBATA, Tomoko ANDO, Aimi YOSHIDA, Kei-ichi SUGIYAMA

Division of Genome Safety Science, National Institute of Health Sciences

P-06 Mechanisms of Reactive oxygen species-dependent DNA damage by the COVID-19 therapeutic drug, the molnupiravir metabolite

Rinya YOGO^{1,2}, Yurie MORI¹, Hatasu KOBAYASHI¹, Hirotaka KATSUZAKI³, Yuichiro HIRAO^{1,4},
Hirokazu KOTANI², Shosuke KAWANISHI⁵, Mariko MURATA¹, Shinji OIKAWA¹

¹Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine,

²Department of Forensic Medicine and Sciences, Mie University Graduate School of Medicine,

³Department of Life Sciences, Graduate School of Bioresources, Mie University,

⁴Department of Home Care Nursing, Mie Prefectural College of Nursing,

⁵Faculty of Pharmaceutical Sciences, Suzuka University of Medical Science

P-07 Mutagenicity in liver of MutaMouse orally treated with toluene diisocyanate

Mariko MATSUMOTO¹, Takako ISO¹, Takaaki UMANO¹, Yasumasa MURATA¹, Nozomu HIROSE¹,
Kenichi MASUMURA¹, Katsuyoshi HORIBATA², Kei-ichi SUGIYAMA²

¹Division of Risk Assessment, National Institute of Health Sciences,

²Division of Genome Safety Science, National Institute of Health Sciences

P-08 Examination of kinetochore analysis by CREST staining

Kenichiro SUZUKI, Michiyo OBA, Kanako IWAKURA, Sawako KASAMOTO, Shoji MASUMORI,
Fukutaro MIZUHASHI

BioSafety Research Center Inc.

P-09 Effects of Ultraviolet and Visible Light on DNA Damage and Repair in Zebrafish Embryos

Riku HIROTANI, Kazuomi SATO

Graduate School of Agriculture, Tamagawa University

**P-10
(O-8) Effect of circadian rhythm disruption induced by time-restricted feeding and exercise on oxidative stress and immune**

Yun-Shan LI^{1,3}, Hiroaki FUJIHARA², Koichi FUJISAWA¹, Kazuaki KAWAI¹

¹Department of Environmental Oncology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health,

²Department of Ergonomics, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan,

³Center for Stress-related Disease Control and Prevention, University of Occupational and Environmental Health, Japan

P-11 Toxicity evaluation of advanced materials using mouse liver organoids

Rikako ISHIGAMORI¹, Masahiko IMAI¹, Akiko OHNO², Yukari TOTSUKA¹

¹Environmental Health Sciences, Hoshi University,

²Division of Genome Safety Science, Center for Biological Safety and Research, National Institute of Health Sciences

P-12 Effects of Nanoplastics on Cultured Cells and Zebrafish Embryos

Kotaro MURAKAMI¹, Kazuma TAIRA¹, Kazuomi SATO^{1,2}

¹Division of Animal Sciences, College of Agriculture, Tamagawa University,

²Graduate School of Agriculture, Tamagawa University

P-13 Mutational spectrum analysis in bicyclic aromatic amines

Kohei WATANABE¹, Kohei SHIMOMURA¹, Ayaka ANDO¹, Reika SATO¹, Chisaki SUZUKI¹, Madoka TAKEUCHI¹, Noriyuki MIYOSHI², Takuma KOBAYASHI², Yukari TOTSUKA³

¹Laboratory of Environmental Toxicology and Carcinogenesis, School of Pharmacy, Nihon University,

²Food and Nutritional Sciences, University of Shizuoka,

³Department of Environmental Health Sciences, Hoshi University

P-14 Characteristics of *de novo* mutations in the genome of offspring of acrylamide-treated male mice

Kenichi MASUMURA¹, Tomoko ANDO², Katsuyoshi HORIBATA², Yuji ISHII³, Kei-ichi SUGIYAMA²

¹Division of Risk Assessment, National Institute of Health Sciences, ²Division of Genome Safety Science, NIHS,

³Division of Pathology, NIHs

P-15 MLA and cellular uptake into L5178Y cells for oligonucleotides containing novel modified nucleic acid ALNA[Ms]

Ayaka FURUKAWA¹, Noriko UCHIYAMA¹, Tetsuya OOTA¹, Katsuya YAMADA¹, Tomo TAKEGAWA², Shumpei MURATA², Takuya FUJITA¹

¹Safety Research Laboratories, Research Division, Mitsubishi Tanabe Pharma Corporation,

²Modality Laboratories, Research Division, Mitsubishi Tanabe Pharma Corporation

P-16 Effects of Glutathione Depletion in Aldehyde dehydrogenase(ALDH2)-Deficient Cells

Yuka HIRAKAWA¹, Jun NAKAMURA², Masanobu KAWANISHI¹

¹Laboratory of Environmental Molecular Toxicology, Graduate School of Science, Osaka Metropolitan University,

²Graduate School of Veterinary Science, Osaka Metropolitan University

P-17 (O-1) NADH and copper-mediated oxidative DNA damage induced by rosmarinic acid

Hatasu KOBAYASHI¹, Yuichiro HIRAO^{1,2}, Shosuke KAWANISHI³, Shinya KATO⁴, Yurie MORI¹, Mariko MURATA^{1,5}, Shinji OIKAWA¹

¹Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine,

²Mie Prefectural College of Nursing, ³Faculty of Pharmaceutical Science, Suzuka University of Medical Science,

⁴Radioisotope Experimental Facility, Advanced Science Research Promotion Center, Mie University,

⁵Faculty of Nursing, Suzuka University of Medical Science

P-18 (O-9) Mutations on plasmid DNA irradiated with carbon ion beams

Hiroaki TERATO¹, Yuka TOKUYAMA², Kanae MORI², Midori ISOBE¹

¹Advanced Science Research Center, Okayama University,

²Analytical Research Center for Experimental Sciences, Saga University

P-19 Exploring the mechanism of micronucleus formation under rat S9 metabolic activation induced by flavor compounds through ToxTracker and high-content assays

Tomohiro TAKAHASHI¹, Satoru MUNAKATA¹, Taku WATANABE¹, Ortner VIKTORIA², Waclawek KARIN², Tsuneo HASHIZUME¹

¹Japan Tobacco Inc., ²Oekolab Ges. f. Umweltanalytik

P-20**Elucidation of the mechanism of mutagenesis by DNA ribosyltransferase scabin**Miyuki OHARA¹, Isao KURAOKA², Masanobu KAWANISHI¹¹Laboratory of Environmental Molecular Toxicology, Graduate School of Science, Osaka Metropolitan University,²Department of Chemistry, Graduate School of Science, Fukuoka University**P-21****The mechanism study of acetamide-induced large micronuclei formation using primary rat hepatocytes**Yohei YAMAGAMI^{1,2}, Yuji ISHII¹, Shinji TAKASU¹, Kengo KASAMATSU^{1,3}, Meili SOMA¹, Takeshi TOYODA¹, Tomoaki MURAKAMI², Kumiko OGAWA¹¹Division of Pathology, National Institute of Health Sciences,²Laboratory of Veterinary Toxicology, Tokyo University of Agriculture and Technology,³Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology**P-22****The oxidation of guanine by singlet oxygen**Akito KOMI¹, Taishu KAWADA¹, Moka MAEHARA¹, Hitoki MITANI¹, Kanau NASU¹, Katsuhito KINO^{1,2}¹Department of Nano Material and Bio Engineering, Faculty of Science and Engineering, Tokushima Bunri University,²Center for Advance Science and Engineering, Tokushima Bunri University**P-23****Characterization of Bhas42 cells transformed by different chemicals**

(O-2)

Toshinori MIURA, Naotero DENTA, Masaki NAKAGAWA, Masashi SEKIMOTO
Environmental Health Sciences Laboratory**P-24****Investigation of *in vivo* mutagenicity of 6-methoxyquinoline using gpt delta rats**Shinji TAKASU¹, Yuji ISHII¹, Meili SOMA¹, Kengo KASAMATSU^{1,2}, Yohei YAMAGAMI^{1,3}, Takeshi TOYODA¹, Kumiko OGAWA¹¹Division of Pathology, National Institute of Health Sciences,²Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology,³Laboratory of Veterinary Toxicology, Tokyo University of Agriculture and Technology**P-25****Establishment of immortalized cells to assess aldehyde toxicity**Aya KAWAI¹, Jun NAKAMURA², Kazunori SHIRAISHI¹, Masanobu KAWANISHI¹¹Department of Biochemistry, Graduate School of Science, Osaka Metropolitan University,²Graduate School of Veterinary Medicine, Osaka Metropolitan University**P-26****Investigation of the mechanism of genotoxicity of estrogen metabolites using MCF-7 cells**Kohei SUGIHAR¹, Yasuyuki HISHINUMA², Moeka NAMIKI¹, Atsushige ASHIMORI³, Masashi SEKIMOTO²¹Graduate School of Environmental Health, Azabu University, ²Department of Environmental Science, Azabu University,³Graduate School of Medicine, Faculty of Medicine and Health Sciences, Yamaguchi University**P-27****Automated micronucleus discrimination for *in vitro* micronucleus testing using general-purpose image analysis**Kenji TAKESHITA, Shunji FURUKUMA, Hiromichi OGURA
UBE Scientific Analysis Laboratory, Inc.**P-28****Functional regulation of DNA helicase RTEL1 via post-translational modifications**Kosuke MATSUO¹, Remi TAMEDA¹, Hidefumi IWASHITA¹, Yusuke SANADA², Shinsuke ITO³,Isao KURAOKA¹, Arato TAKEDACHI¹¹Dpt of Biochem, Grad Sch of Sci, Fukuoka Univ, ²Dpt of Physchem, Faculty of Sci, Fukuoka Univ, ³RIKEN IMS**P-29****Study of liver S9 preparation methods**Sho FUJIWARA, Hatsumi IKUMA, Naomi FUJIWARA, Hisayoshi TAKAGI, Masayasu OZAKI
Biotechnical Center, Japan SLC, Inc.**P-30****Evaluation of agonist and antagonist activities of pesticides and other environmentally hazardous chemicals using yeast expressing *Daphnia magna* juvenile hormone receptor**Mayuko NAKASHIMA¹, Sayoko HARASHIMA^{2,3}, Takashi YAGI^{1,2}, Masanobu KAWANISHI^{1,2}¹Department of Biological Chemistry, Graduate School of Science, Osaka Metropolitan University,²Department of Biological Science, Graduate School of Science, Osaka Prefecture University,³Department of Applied Biological Chemistry, Graduate School of Agriculture, Osaka Metropolitan University

- P-31 Identification of the Novel Crosstalk Between DNA Damage Response and RNA Modifications**
Sujin SONG¹, Akito YOSHIDA¹, Aoshi KITAMURA¹, Asuka TACHIKAWA¹, Yu-Hsien HWANG-FU², Zachary JOHNSON², Kiyoe URA¹, Akira SASSA¹
¹Department of Biology, Faculty of Science, Chiba University, ²Alida Biosciences, Inc.
- P-32 Elucidating the role of O6-methylguanine DNA methyltransferase in regulation of inflammatory response**
Nonoka KONISHI¹, Aoshi KITAMURA¹, Akiko UKAI², Manabu YASUI², Masamitsu HONMA², Kei-ichi SUGIYAMA², Kiyoe URA¹, Akira SASSA¹
¹Department of Biology, Faculty of Science, Chiba University,
²Division of Genome Safety Science, National Institute of Health Science
- P-33 Evaluation of higher genome instability using ATAC-seq as an indicator of chromatin structure change**
Keigo YAMAKITA¹, Manabu YASUI², Masamitsu HONMA², Kei-ichi SUGIYAMA², Ryoji FUJIKI³, Atsushi KANEDA^{3,4}, Kiyoe URA¹, Akira SASSA¹
¹Department of Biology, Faculty of Science, Chiba University,
²Division of Genome Safety Science, National Institute of Health Sciences,
³Graduate School of Medicine and School of Medicine, Chiba University,
⁴Health and Disease Omics Center, Chiba University
- P-34 Visualization for dynamic change in resolution of homologous recombination intermediate**
Yusaku HAMADA¹, Masataka TSUDA^{1,2}
¹Program of Biomedical Science, Graduate School of Integrated Sciences for Life, Hiroshima University,
²Division of Genome Safety Science, National Institute of Health Science
- P-35 Uncovering the role of RNA inosine modification in genome integrity**
Akito YOSHIDA¹, Aoshi KITAMURA¹, Yu-Hsien HWANG-FU², Zachary JOHNSON², Kiyoe URA¹, Akira SASSA¹
¹Department of Biology, Faculty of Science, Chiba University., ²Alida Biosciences, Inc.
- P-36 Repair mechanisms and biological effects of DNA damage caused by endogenous mutagene formaldehyde**
Yasuyoshi OKA, Tomoo OGI
 Department of Genetics, Research Institute of Environmental Medicine, Nagoya University
- P-37 Novel reporter plasmid for evaluating the dynamics of Non-homologous end joining repair in living cells**
Gakuto FUKUSHIMA¹, Kosuke MATSUO¹, Yoshihiro FUJIMURA¹, Haruto KOJIMA¹, Ayano BABA², Hayato NISHINO², Rui ODA², Isao KURAOKA¹, Arato TAKEDACHI¹
¹Functional Biochemistry Group, Department of Chemistry, Graduate School of Science, Fukuoka University, Japan,
²Functional Biochemistry Group, Department of Chemistry, Faculty of Science, Fukuoka University, Japan
- P-38 Novel reporter plasmids for evaluating DNA damage response in living cells**
Yoshihiro FUJIMURA¹, Gakuto FUKUSHIMA¹, Kousuke MATSUO¹, Haruto KOJIMA¹, Ayano BABA², Hayato NISHINO², Rui ODA², Isao KURAOKA¹, Arato TAKEDACHI¹
¹Department of Chemistry, Graduate School of Science, Fukuoka University,
²Department of Chemistry, Faculty of Science, Fukuoka University
- P-39 Homologous Recombination dependent Genomic Instability Mechanism by Incorporation of Deaminated Nucleotides in *Saccharomyces cerevisiae***
Rina MACHI, Tatsuo NUNOSHIBA
 International Christian University
- P-40 Impact of dysregulation of fatty aldehyde metabolism on genome stability**
Wataru SAKAI^{1,2}, Tomoya HOTANI^{1,2}, Taketoshi KAJIMOTO³, Taro OKADA³, Masakazu SHINOHARA³, Masayuki YOKOI^{1,2}, Kaoru SUGASAWA^{1,2}
¹Biosignal Research Center, Kobe University, ²Graduate School of Science, Kobe University,
³Graduate School of Medicine, Kobe University
- P-41 DNA Repair mechanism of 3'-blocking lesion**
Masataka TSUDA
 Division of Genome Safety Science, National Institute of Health Sciences

- P-42 Competition for transcriptional cofactors in the AhR/Nrf2 and Wnt/β-catenin pathways**
Mebae KOIKE, Showa KOMATSU, Shun TAKEMOTO, Kazuhiro SHIIZAKI
Graduate School of Life Sciences, Toyo University

- P-43 Formation of DNA double strand breaks after coexposure to UVA1 and UVB was associated with Mre11**
Mai NARIMICHI, Yukako KOMAKI, Yuko IBUKI
Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka

- P-44 Induction of premature senescence by formaldehyde exposure and associated role of histone H2AX**
Satoko ANDO¹, Yukako KOMAKI^{1,2}, Takashi SUZUKI², Yuko IBUKI^{1,2}
¹Department of Environmental and Life Sciences, School of Food and Nutritional Sciences, University of Shizuoka,
²Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka

- P-45 Analysis of germline mutational patterns in DNA mismatch repair-deficient mice**
Noriko TAKANO¹, Kyoko HIDAKA^{1,2}, Mizuki OHNO¹
¹Department of Comprehensive Oncology, Faculty of Medical Science, Kyushu University,
²Center for Fundamental Education, The University of Kitakyushu

- P-46 Construction of mutagenesis assay focusing on “Transcription coupled nucleotide excision repair (TCR)”**
Yuto OUCHI, Kazuhiro SHIIZAKI
Toyo University, Graduate School of Life Sciences

- P-47 Evaluation of agonist activity of putative endogenous AhR ligands derived from tryptophan**
Emiri YASUDA¹, Jun NAKAMURA², Masanobu KAWANISHI¹
¹Department of Biochemistry, School of Science, Osaka Metropolitan University,
²Graduate School of Veterinary Sciences, Osaka Metropolitan University

- P-48 Evaluation of genotoxicity and measurement of spontaneous mutation frequency of colibactin-producing *E. coli***
Azusa KAWAI¹, Osamu TSUBOHIRA², Ai UESHIMA², Yoshimitsu ODA², Yuta TSUNEMATSU³,
Michio SATO³, Yuichiro HIRAYAMA³, Noriyuki MIYOSHI⁴, Yuji IWASHITA⁵, Yuko YOSHIKAWA⁶,
Haruhiko SUGIMURA⁵, Yukari TOTSUKA⁷, Keiji WAKABAYASHI⁴, Kenji WATANABE³,
Masanobu KAWANISHI²
¹Department of Biochemistry, School of Science, Osaka Metropolitan University,
²Laboratory of Environmental Molecular Toxicology, Graduate School of Science, Osaka Metropolitan University,
³Pharmacy Department, University of Shizuoka, ⁴Department of Food and Nutrition, University of Shizuoka,
⁵Medical Faculty, Hamamatsu University School of Medicine,
⁶Veterinary Department, Nippon Veterinary And Life Science University,
⁷Department of Environmental Health Sciences, Hoshi University

- P-49 Detection of INDEL Mutations Associated with Cardiac Aging in DNA Repair-Deficient Mice**
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- P-50 Elevated DNA abasic sites in estrogen-induced breast cancer: A possible involvement of lipid mediators**
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- P-51 (O-5) Establishment of mice with complete human mutations that lack formaldehyde-metabolizing enzymes and their phenotypes**
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- P-52 The effect of age at exposure on radiation-induced carcinogenesis**
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- P-53 Age-Dependent Cellular Responses to Ionizing Radiation: A Comparative Study in Infant and Adult Mouse Intestinal Crypts**
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- P-54 Atomic bomb radiation and cancer risk -Estimate from multistage model including cell expansion and comparison with the Life Span Study-**
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- P-55 Questioning the linear no-threshold model (LNT): Lessons from Hiroshima/Nagasaki and Fukushima**
Shizuyo SUTOU
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- P-56 A Review of the Health Effects of Heated Tobacco Products Through a Literature Search**
Hiroaki ASO, Naoya YOKOTA, Misato YOSHIKAWA, Katsuya SUEMARU, Masahiko WATANABE
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- P-57 Elucidating the Relationship between Environmental Factors and Human Cancer Development Using Next Generation Sequencers**
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- P-58 Mutation signature analysis of N-nitroso bile acid conjugates**
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- P-59 Analysis of Colon Cancer Cell Growth Inhibitory Activity of Compounds from Marine Organisms**
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³Seto Inland Sea Carbon-neutral Research Center, Hiroshima University
- P-60 Proteomic analysis of anti-tumor effect with Actinidia arguta juice on lung cancer induced by 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone in mice**
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- P-61 Anti-photoaging effects of blackcurrant anthocyanins on UVB-irradiated TK6 cell**
Nannapat NILRAT, Mei YAMAUCHI, Nanami MIURA, Kousuke KOYAMA, Ayumi YAMAMOTO
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- P-62 Effects of Visible Light on Photostress and Mitigation of Oxidative Stress**
Yosuke HIRAGA, Kazuomi SATO
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P-63 Novel reporter plasmids for investigating the dynamics of mismatch repair mechanisms in living cells

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P-64 Development of a Simple and Rapid DNA Methylation Analysis Method Using a Nanopore Sequencer

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P-65 Development of efficient w/o emulsion generation methods for single-cell analysis

Yuki KOBAYASHI, Tomonari MATSUDA

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P-66 Whole genome sequence of TA100 strain: lot-to-lot variation of genome genes (BMS pilot study)

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P-67 Effects of Eight Amino Acids-L-Histidine Mixtures on the Results of Ames Test

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P-68 Miniaturization of in vitro micronucleus tests (microscopic method) using 96-well plates for screening assays

Satsuki CHIKURA, Rie MORISHIMA, Kumiko OKADA

Axcelead Tokyo West Partners, Inc.

P-69 The structure determination of a novel DNA damage was confirmed by mass spectrometry

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P-70 The immobilization of flavin at the end of DNA by click reaction for photooxidation of guanine

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P-71 Synthesis of cationic photosensitizers and photooxidation of guanine

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P-72 Involvement of oxygen in guanine photooxidation

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- P-73 Mutagenicity assessment scheme for primary aromatic amines for the target chemicals under Chemical Substances Control Law**
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 Masamitsu HONMA²
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- P-74 The induction of cytokines related to allergy in alveolar epithelial cells by oxygenated polycyclic aromatic hydrocarbons (O-12)**
Kentaro MISAKI¹, Takeji TAKAMURA², Hirohisa TAKANO^{3,4}, Ken-ichiro INOUE¹
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³Institute for International Academic Research, Kyoto University of Advanced Science,
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- P-75 Comparison of the results of dose-response analyses based on carcinogenicity data and predicted acceptable intake by the Carcinogenic Potency Categorization Approach (CPCA) for known nitrosamines**
Kaoru INOUE¹, Akira KAWASHIMA¹, Akihiko HIROSE², Kei-ichi SUGIYAMA¹, Yosuke DEMIZU¹,
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- P-76 Four genotoxic marker genes (Bax, Btg2, Ccng1, and Cdkn1a) discriminate genotoxic hepatocarcinogens from non-genotoxic hepatocarcinogens and non-genotoxic non-hepatocarcinogens in Open TG-GATEs**
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²Division of Genome Safety Science, National Institute of Health Sciences
- P-77 Effect of organic solvents on Enhanced Ames Test (EAT)**
Shizuka OKAZAKI, Yuko SHIMIZU, Kenzo SETO, Miyu SEKIGUCHI, Wataru TAKAHASHI,
 Miyuki SHIGANO, Katsuaki YASUNAGA, Tooru FUJIMOTO
 Mediford Corporation
- P-78 Elimination of mutagenic contaminants from water using cellulose bearing ferrous-phthalocyanine**
Sakae ARIMOTO, Kayoko SANO, Yuka SOGA, Kaori OHTA, Yuki KITAMURA
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- P-79 Identification and Ultra-Sensitive Quantitation of N-Nitroso N-Desmethyl Orphenadrine Impurity in Orphenadrine Citrate API Using LC-MS/MS**
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- P-80 Study on monitoring surfactants in aquatic environment using fish gut microbiota analysis**
Kohei HIGASHI¹, Takayoshi SUZUKI², Yasunobu AOKI³, Masami YAMADA¹
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³National Institute for Environmental Studies
- P-81 Simultaneous Analysis of Areca Nut- and Tobacco-Specific Nitrosamines Using Liquid Chromatography-Tandem Mass Spectrometry**
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P-82 Establishment of a novel reporter assay incorporating metabolic activation system using yeast expressing human nuclear receptors for detecting endocrine disruptors

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P-83 Nitrosamine Management Challenges in the Pharmaceutical Industry

Yosuke MINO

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P-84 Upcoming mandate of the SEND implementation of genotoxicity study data based on the SENDIG-Genetox v1.0

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P-85 Predicting of Ames Test Results Using Quantum Chemical Calculations

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P-86 Exploring How to Standardize SEND Specifications Based on Analyses of Differences Between SEND Datasets of Genetic Toxicology Studies Created by Two Test Facilities

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P-87 Mutagenicity Prediction of Aromatic Boronic Acids Using Quantum Chemical Calculation

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