

13:20 - 14:00 <Web>

ePoster (Online Poster Session)

13:20 [Odd number of P01-33] Core time 1

14:10 - 15:00 <Medium Hall>

General Meeting & Awards Ceremony

15:00 - 16:40 <Medium Hall>

Award Lecture

Chair: Masami YAMADA (National Defense Academy of Japan)

JEMS Award 2022

AW 15:00 **Studies on carcinogenic activity of the combination of a colonic non-carcinogenic mutagen and colitis inducer**
Atsushi HAKURA
Global Drug Safety, Eisai Co.,Ltd.

JEMS Encouragement Award 2022

EA-1 15:30 **Molecular mechanisms of mutagenesis and genomic instability caused by ribonucleotides incorporated into DNA**
Akira SASSA
Department of Biology, Graduate School of Science, Chiba University

JEMS Encouragement Award 2022

EA-2 15:50 **The mechanism of radiation-induced tumorigenesis using *in vivo* model**
Megumi SASATANI
Research Institute for Radiation Biology and Medicine, Hiroshima University

JEMS Service Award 2022

SA 16:10 **Investigation of antimutagenic and photomutagenic substances**
Sakae ARIMOTO
Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University

16:50 - 17:30 <Web>

ePoster (Online Poster Session)

16:50 [Even number of P02-34] Core time 2

8:40

Door Open

9:00 - 9:40 (Web)

ePoster (Online Poster Session)

9:00 [Odd number of P35-65] Core time 3

9:50 - 11:50 (Medium Hall)

Symposium 2 New Modalities and Regulatory Science

Chairs: Katsuhito KINO (Tokushima Bunri University)
Akira TAKEIRI (Chugai Pharmaceutical Co., Ltd.)

- | | | |
|-------------------|-------|--|
| S2-1 | 9:50 | Case Studies in Safety Evaluation for New Modalities
<u>Chinami ARUGA</u>
Safety Research Laboratories, Mitsubishi Tanabe Pharma Corporation |
| S2-2 | 10:12 | Safety of genome editing and mutation research
<u>Takayoshi SUZUKI</u>
Division of Molecular Target and Gene Therapy Products, National Institute of Health Sciences |
| S2-3 | 10:34 | Current issues on quality and safety assessment of cell-based therapeutic products
<u>Satoshi YASUDA</u>
Division of Cell-Based Therapeutic Products, National Institute of Health Sciences |
| S2-4 | 10:56 | Understanding the molecular basis of nucleic acid-induced innate immunity using a DNA repair-deficient model
<u>Akira SASSA</u>
Department of Biology, Graduate School of Science, Chiba University |
| S2-5 | 11:18 | Analytical and diagnostic methods based on single molecule fluorescent blinking observation
<u>Kiyohiko KAWAI</u>
SANKEN, Osaka University |
| Discussion | 11:40 | |

12:00 - 12:40 (Web)

ePoster (Online Poster Session)

12:00 [Even Number of P36-66] Core time 4

13:50 - 15:50 〈Medium Hall〉

Symposium 3 New Development of Radiation Effects Research from the Perspective of Genome Analysis

Chairs: Asao NODA (Radiation Effects Research Foundation)
Masahiko WATANABE (Shujitsu University)

- S3-1** 13:50 **Direct observation of DNA damage caused by mutagens and radiation using atomic force microscopy**
Toshiaki NAKANO¹, Ken AKAMATSU¹, Masataka TUDA², Hiroshi IDE², Naoya SHIKAZONO¹
¹National Institutes for Quantum Science and Technology (QST),
²Graduate School of Integrated Sciences for Life, Hiroshima University
- S3-2** 14:12 **Germline de novo mutations and radiation effects**
Arikuni UCHIMURA, Yasunari SATOH
Radiation Effects Research Foundation
- S3-3** 14:34 **Frequencies and characteristics of somatic mutations in hematopoietic stem cells from mice exposed to X-ray radiation**
Osamu TANABE, Yukiko MATSUDA
Radiation Effects Research Foundation
- S3-4** 14:56 **Characteristic genetic abnormalities revealed by genomic analysis of radiation-induced cancer**
Kazuhiro DAINO¹, Hirotaka TACHIBANA^{1,2}, Atsuko ISHIKAWA¹, Kenshi SUZUKI¹, Takamitsu MORIOKA¹, Tatsuhiko IMAOKA¹, Shizuko KAKINUMA¹
¹National Institutes for Quantum Science and Technology,
²Department of Biology, Graduate School of Science, Chiba university
- S3-5** 15:18 **Epidemiological study of atomic bomb survivors**
Ritsu SAKATA
Radiation Effects Research Foundation
- Discussion** 15:40

16:00 - 16:15 〈Medium Hall〉

The Best Presentation Awards Ceremony & Closing Remarks

Poster View and Web Chat Time: 2022 November 9 (Wed)- November 18 (Fri)

Poster Discussion: [Core time 1] November 15 (Tue), 13:20-14:00 [P01-33 for odd number]
[Core time 2] November 15 (Tue), 16:50-17:30 [P02-34 for even number]

Mutagenicity and genotoxicity

- P-01** **Reconsideration of bladder-specific carcinogenicity of BBN - Genotoxicity evaluation of major metabolite BCPN using *gpt* delta mice**
Yoshiya YAMAMURA, Yuzoh TAKEZAWA, Misaki ABE, Naofumi TAKAHASHI,
Chinatsu FUJIWARA, Shinya MIYAZAKI, Kunio WADA
The Institute of Environmental Toxicology
- P-02** **Investigation of the measurement conditions in a GLP-applied rat micronucleus assay using a flow cytometer**
Akihiro KAWADE¹, Naoki KOYAMA², Rika SATO¹, Masaki KURAKAMI², Takeshi YAMAGATA¹,
Dai KAKIUCHI², Atsushi HAKURA², Tomomi SHIBATA¹, Kenichi NORITAKE¹, Shoji ASAKURA²
¹Sunplanet Co., Ltd., ²Eisai Co., Ltd.
- P-03** **Impact of endogenous oxidative DNA damage in germline mutations: study from repair-deficient mice**
Mizuki OHNO¹, Noriko TAKANO², Fumiko SASAKI¹, Kyoko HIDAKA³
¹Department of Medical Biophysics and Radiation Biology, Faculty of Medical Sciences, Kyushu University,
²Fac. of Design, Kyushu Univ., ³ Ctr. Fundam. Ed., Univ. of Kitakyushu
- P-04** **Development of a high-throughput mutagenesis assay with *supF* gene and Next Generation Sequencer**
Ren IWATA¹, Hidehiko KAWAI^{1,2}, Hiroyuki KAMIYA^{1,2}
¹Sch. Pharm. Sci., Hiroshima Univ., ²Grad. Sch. Biomed. Hlth. Sci., Hiroshima Univ.
- P-05** **Study on the mechanism of large micronucleus induction by acetamide in rat hepatocytes**
Norifumi TAKIMOTO^{1,2}, Yuji ISHII¹, Tatsuya MITSUMOTO¹, Moeka NAMIKI¹, Shinji TAKASU¹,
Makoto SHIBUTANI², Kumiko OGAWA¹
¹Division of Pathology, National Institute of Health Sciences,
²Laboratory of Veterinary Medicine, Tokyo University of Agriculture and Technology
- P-06** **Detection of genotoxic reactions through directly analyzing DNA damage responses on chromatin fraction**
Katsuyoshi HORIBATA, Kei-ichi SUGIYAMA
Division of Genetics and Mutagenesis, National Institute of Health Sciences
- P-07** **Formaldehyde induces premature senescence and delayed nucleotide excision repair**
Takashi SUZUKI, Yukako KOMAKI, Yuko IBUKI
Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka
- P-08** **A novel mechanism of γ -H2AX induction via nuclease release from endoplasmic reticulum**
Yuta MORI¹, Yukako KOMAKI¹, Tatsushi TOYOOKA², Yuko IBUKI¹
¹Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka,
²National Institute of Occupational Safety and Health
- P-09** **Improvement of bioassay for detecting nuclear receptor ligand activity using yeast protoplasts**
Yuto HANAICHI¹, Yuya FUJITA², Sayoko HARASHIMA², Honami ONISHI², Kentaro MORI²,
Mami MATANO², Takashi YAGI¹, Masanobu KAWANISHI¹
¹Department of Biochemistry, Graduate School of Science, Osaka Metropolitan University,
²Department of Natural Science, Faculty of Life and Environmental Sciences, Osaka Prefecture University

- P-10 Evaluation of cyto- and geno-toxicities induced by enteric bacteria isolated from a Japanese colorectal cancer patient using DNA cross link repair deficient cells**
Osamu TSUBOHIRA¹, Ai UESHIMA¹, Yuta HISATOMI¹, Yoshimitsu ODA¹, Yuta TSUNEMATSU², Michio SATO², Yuichiro HIRAYAMA², Noriyuki MIYOSHI³, Yuji IWASHITA⁴, Yuko YOSHIKAWA⁵, Haruhiko SUGIMURA⁴, Yukari TOTSUKA⁶, Keiji WAKABAYASHI³, Kenji WATANABE², Masanobu KAWANISHI¹
¹Graduate School of Science, Osaka Metropolitan University, ²Pharmacy Department, University of Shizuoka, ³Department of Food and Nutrition, University of Shizuoka, ⁴Medical Faculty, Hamamatsu University School of Medicine, ⁵Veterinary Department, Nippon Veterinary And Life Science University, ⁶National Cancer Center Research Institute
- P-11 Examination of automated growth inhibition identification in Ames test by machine-learning**
Rise KUM, Kyoka KAIYA, Hiroshi ITO
 Scientific Product Assessment Center, Japan Tobacco Inc.
- P-12 Comparison of intra-day variability of response and response to weak mutagens between the 24-well Ames test and conventional method using tobacco extracts**
Yasunori TAKAHASHI, Toru ISHII, Yuka SAKAI, Kyoka KAIYA, Rise KUM, Eri KAWAGUCHI, Emi KUMAGAI, Yuka TSUTSUMI, Tsuneo HASHIZUME, Toshiro FUKUSHIMA
 Scientific Product Assessment Center, Japan Tobacco Inc.
- P-13 Dietary lipids as a source of etheno-DNA damage**
Petr GRUZ¹, Masatomi SHIMIZU², Ayako DAIZO³, Kenichi KAWADA², Masami YAMADA⁴, Masamitsu HONMA⁵, Katsuyoshi HORIBATA¹, Kei-ichi SUGIYAMA¹
¹Division of Genetics and Mutagenesis, National Institute of Health Sciences, ²Division of Medical Nutrition, Tokyo Healthcare University, ³Department of Human Nutrition, Seitoku University, ⁴National Defense Academy, ⁵National Institute of Health Sciences
- P-14 Mutations and DNA adducts induced by aristolochic acid**
Masami YAMADA¹, Daichi KOYABU¹, Yang LUAN², Takayoshi SUZUKI³
¹Department of Applied Chemistry, National Defense Academy, ²Shanghai Jiao Tong University School of Medicine, ³National Institute of Health Sciences

Organic, biological or computational chemistry of mutagens

- P-15 Ames mutagenicity investigation for 15 aromatic or cyclic *N*-nitroso compounds**
Ayako FURUHAMA¹, Kei-ichi SUGIYAMA¹, Masamitsu HONMA²
¹Division of Genetics and Mutagenesis, National Institute of Health Sciences (NIHS), ²National Institute of Health Sciences (NIHS)

Molecular biology of mutagens

- P-16 Analysis of the mechanism of DNA double-strand break-inducing effect of quercetin, a food-derived flavonoid**
Yuduki SOMEYA¹, Sakine KOBAYASHI², Shinta SAITO³, Shigeki TAKEDA^{1,2}, Noritaka ADACHI³, Aya KUROSAWA^{1,2,3,4}
¹Grad. Sch. Sci. Tech., Gunma Univ., ²Sch. Sci. Tech., Gunma Univ., ³Grad. Sch. Nanobiosci., Yokohama City Univ., ⁴Gunma Univ. Cent. Food Sci. Wellness, Gunma Univ.
- P-17 APOBEC3B is involved in the action-at-a-distance mutations by riboguanosine incorporated into DNA**
Kiyoharu YASUI, Tetsuya SUZUKI, Hiroyuki KAMIYA
 Graduate School of Biomedical and Health Sciences, Hiroshima University
- P-18 Involvement of uracil DNA glycosylase on the action-at-a-distance mutations by 8-oxo-7,8-dihydroguanine**
Saho YOSHIDA, Tetsuya SUZUKI, Hiroyuki KAMIYA
 Graduate School of Biomedical and Health Sciences, Hiroshima University

P-19 **Repair pathways for radiation DNA damage under normoxic and hypoxic conditions: Assessment with a panel of repair-deficient human TK6 cells**
Naoto SHIMIZU, Masataka TSUDA
Program of Mathematical and Life Sciences, Graduate School of Integrated Sciences for Life, Hiroshima University

P-20 **Suppression Mechanism of Genome Instability by Deaminated Nucleotides in *Saccharomyces cerevisiae***
Tatsuo NUNOSHIBA¹, Akira MURATA¹, Yohei SUGIMOTO¹, Kenshiro NISHIHARA^{1,2,3}, Miki NISHIMURA¹
¹International Christian University, ²Graduate School of Medicine, Juntendo University, ³National Cancer Center Institute for Cancer Control

P-21 **Repair mechanism of DNA double-strand breaks induced by accumulation of ribonucleotides in the genome**
Yuiko MAYUZUMI¹, Ken TAKAFUJI¹, Asuka TACHIKAWA¹, Kazuma NAKATANI², Manabu YASUI³, Masamitsu HONMA³, Kei-ichi SUGIYAMA³, Kaoru SUGASAWA⁴, Kiyoe URA¹, Akira SASSA¹
¹Graduate School of Science, Chiba University, ²Graduate School of Medical and Pharmaceutical Sciences, Chiba University, ³Division of Genetics and Mutagenesis, National Institute of Health Sciences, ⁴Biosignal Research Center, Kobe University

P-22 **Quantitative evaluation of endogenous DNA double-strand breaks by multi-parametric analyses of γ H2AX**
Asuka TACHIKAWA¹, Yui YOSHIMOTO², Ken TAKAFUJI¹, Yuiko MAYUZUMI¹, Kazuma NAKATANI³, Maki NAKAMURA², Takayuki FUKUDA², Kaoru SUGASAWA⁴, Kiyoe URA¹, Akira SASSA¹
¹Graduate School of Science, Chiba University, ²Tokyo Laboratory, BoZo Research Center Inc., ³Graduate School of Medical and Pharmaceutical Sciences, ⁴Biosignal Research Center, Kobe University

P-23 **Coordination between excision reaction and synthesis reaction**
Aya YOSHIDA, Akane MATSUMOTO, Isao KURAOKA
Department of Chemistry, Faculty of Science, Fukuoka University

P-24 **Functional analysis of Human Endonuclease V**
Kazuma MITSUOKA, Isao KURAOKA
Department of Chemistry, Faculty of Science, Fukuoka University

P-25 **Ubiquitin-mediated functional regulation of RTEL1 in the maintenance of genome stability**
Remi TAMEDA, Isao KURAOKA, Arato TAKEDACHI
Department of Chemistry, Faculty of Science, Fukuoka University

Carcinogenesis

P-26 **The effect of age at exposure on radiation-induced tumorigenesis using mouse models**
Megumi SASATANI, Kenji KAMIYA
Research Institute for Radiation Biology and Medicine, Hiroshima University

P-27 ***In vivo* reporter gene mutation assay for a cancer-prone liver lobe in furan-induced hepatocarcinogenesis in rats**
Daisuke HIBI^{1,2}, Shinji TAKASU¹, Yuji ISHII¹, Takashi UMEMURA^{1,3}
¹Division of Pathology, National Institute of Health Sciences, ²Safety Research Laboratories, ONO Pharmaceutical Co.,Ltd., ³Graduate School of Animal Health Technology, Yamazaki University of Animal Health Technology

Antimutagenesis and anticarcinogenesis

P-28 **Mutagenicity, and correlations between antimutagenicity, radical scavenging activity, and phenolics in edible berry juices**
Sakae ARIMOTO, Jun TAKATA
Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University

New technology

- P-29** **A genome sequencing-based mutagenicity evaluation method using human cells; Examination to reduce error frequency under Hawk-Seq™ analysis**
Sayaka HOSOI, Takako HIROSE, Shoji MATSUMURA, Naohiro IKEDA, Masayuki YAMANE
R&D, Safety Science Research, Kao Corporation
- P-30** **Evaluation of the error-corrected sequencing-based mutagenicity assay using *gpt* delta mice**
Shoji MATSUMURA¹, Sayaka HOSOI¹, Takako HIROSE¹, Yuki OTSUBO¹, Naohiro IKEDA¹, Masayuki YAMANE¹, Takayoshi SUZUKI², Kenichi MASUMURA³, Kei-ichi SUGIYAMA⁴
¹R&D, Safety Science Research, Kao Corporation,
²Division of Molecular Target and Gene Therapy Products, National Institute of Health Sciences,
³Division of Risk Assessment, National Institute of Health Sciences,
⁴Division of Genetics and Mutagenesis, National Institute of Health Sciences
- P-31** **A pipeline for *de novo* mutation detection – using oxidative DNA damage repair-deficient mice**
Kyoko HIDAOKA¹, Noriko TAKANO², Fumiko SASAKI³, Mizuki OHNO³
¹Ctr. Fundam. Ed., Univ. of Kitakyushu, ²Fac. of Design, Kyushu Univ.,
³Dept. Med. Biophys. & Radiat. Biol., Med. Sci., Kyushu Univ.

Environmental pollution

- P-32** **Development of a yeast reporter gene assay to detect ligands of freshwater cladoceran *Daphnia magna* ultraspiracle, a homolog of vertebrate retinoid X receptors**
Sayoko ITO-HARASHIMA^{1,2}, Yumiko TSUBOUCHI¹, Eiji TAKADA¹, Masanobu KAWANISHI^{1,3}, Takashi YAGI^{1,3}
¹Department of Biological Science, Graduate School of Science, Osaka Prefecture University,
²Department of Applied Biological Chemistry, Graduate School of Agriculture, Osaka Metropolitan University,
³Department of Biological Chemistry, Graduate School of Science, Osaka Metropolitan University

Others

- P-33** **Collaborative study of thresholds for mutagens: thresholds in the micronucleus test**
Shizuyo SUTOU¹, Akiko KOEDA², Kana KOMATSU², Toshiyuki SHIRAGIKU³, Hiroshi SEKI⁴, Toshiyuki KUDO¹
¹Shujitsu University, ²Ina Research Inc., ³Otsuka Pharmaceutical Co., Ltd., ⁴BML Inc.
- P-34** **The molecular mechanism of recognition of snake venom phosphodiesterase against cyclic DNA substrates**
Narumi AOKI-SHIOI, Ryosuke SHIKASHO, Daiki MIHARA, Isao KURAOKA
Department of Chemistry, Faculty of Science, Fukuoka University

Poster View and Web Chat Time: 2022 November 9 (Wed)- November 18 (Fri)

Poster Discussion: [Core time 3] November 16 (Wed), 9:00-9:40 [P35-65 for odd number]
[Core time 4] November 16 (Wed), 12:00-12:40 [P36-66 for even number]

Mutagenicity and genotoxicity

- P-35 Mechanisms of site-specific tumorigenesis in the rat kidney treated with madder color**
Tatsuya MITSUMOTO^{1,2}, Yuji ISHII¹, Norifumi TAKIMOTO^{1,3}, Shinji TAKASU¹, Moeka NAMIKI¹, Takashi UMEMURA², Takehiko NOHMI¹, Kumiko OGAWA¹
¹Division of Pathology, National Institute of Health Science,
²Faculty of Animal Health Technology, Yamazaki University of Agriculture and Technology,
³Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology
- P-36 Transgenerational Epigenetic Inheritance (TEI) and activation of aromatic hydrocarbon receptors (AhRs) by polycyclic aromatic hydrocarbon compounds (PAHs)**
Yukiharu HORIYA
Laboratory of Environmental Epigenetics
- P-37 Effects of expression level of base excision repair enzyme OGG1 on action-at-a-distance mutation induced by 8-oxo-7,8-dihydroguanine**
Masano TAGA¹, Tetsuya SUZUKI^{1,2}, Hiroyuki KAMIYA^{1,2}
¹School of Pharmaceutical Sciences, Hiroshima University,
²Graduate School of Biomedical and Health Sciences, Hiroshima University
- P-38 Trials and issues of an integrated in vitro genotoxicity test by toxicoproteomics using the data independent acquisition method**
Manabu YASUI¹, Akiko UKAI¹, Jun ADACHI², Takayoshi SUZUKI³, Masamitsu HONMA⁴, Keiichi SUGIYAMA¹
¹Div. Genetics & Mutag., NIHS, ²Lab. Proteome Res., NIBIOHN, ³Div. Mol. Target & Gene Therapy Prod., NIHS, ⁴Div. Gen. Affairs, NIHS
- P-39 Analysis of mutations in male germ cells and offspring of acrylamide-treated *gpt* delta mice**
Kenichi MASUMURA¹, Tomoko ANDO², Yuji ISHII³, Kei-ichi SUGIYAMA²
¹Division of Risk Assessment, National Institute of Health Sciences,
²Division of Genetics and Mutagenesis, National Institute of Health Sciences,
³Division of Pathology, National Institute of Health Sciences
- P-40 Copper-mediated DNA damage caused by purpurin, a natural anthraquinone**
Hatasu KOBAYASHI¹, Yurie MORI^{1,2}, Ryo IWASA¹, Yuichiro HIRAO^{1,3}, Shinya KATO⁴, Shosuke KAWANISHI⁵, Mariko MURATA¹, Shinji OIKAWA¹
¹Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine,
²Faculty of Pharmacy, Gifu University, ³Mie Prefectural College of Nursing,
⁴Radioisotope Experimental Facility, Advanced Science Research Promotion Center, Mie University,
⁵Faculty of Pharmaceutical Science, Suzuka University of Medical Science
- P-41 Development of an epi-genotoxicity assay detecting chromatin modifications**
Aoshi KITAMURA¹, Haruto YAMADA¹, Ken TAKAFUJI¹, Mizuki ODAGIRI¹, Manabu YASUI², Masamitsu HONMA², Kei-ichi SUGIYAMA², Kiyoe URA¹, Akira SASSA¹
¹Graduate School of Science, Chiba University,
²Division of Genetics and Mutagenesis, National Institute of Health Sciences
- P-42 Increases of genotoxicity of carbon-based nanomaterials with UV irradiation**
Natsumi MIZOBATA¹, Ayano MIYATA², Kotori MIYAI², Masanobu KAWANISI¹
¹Department of Biological Chemistry, Osaka Metropolitan University,
²Department of Biological Science, Osaka Prefecture University

P-43 Study on a novel pathway of DNA interstrand cross-link formation mediated by alcohol dehydrogenase (ADH)Yuya FUJITA¹, Jun NAKAMURA², Zhenfa ZHANG³, Tomonari MATSUDA⁴, Minoru TAKATA⁵, Masanobu KAWANISHI¹¹Laboratory of Environmental Molecular Toxicology, Graduate School of Science, Osaka Metropolitan University,²Graduate School of Veterinary Science, Osaka Metropolitan University,³Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill,⁴Research Center for Environmental Quality Management, Graduate School of Engineering, Kyoto University,⁵Graduate School of Biostudies, Kyoto University**P-44 Study on unsubstituted etheno-DNA adducts formed by lipid-derived aldehydes**

Yuma NAGUMO, Yusuke HATAKAWA, Seon Hwa LEE, Tomoyuki OE

Graduate School of Pharmaceutical Sciences, Tohoku University

P-45 Micronucleus test using a three-dimensional human airway model: Investigation of fundamental treatment conditions and evaluation of well-known genotoxicants requiring metabolism

Satoru MUNAKATA, Taku WATANABE, Tomohiro TAKAHASHI, Shiori KIMURO,

Tsuneo HASHIZUME

Japan Tobacco Inc. Scientific Product Assessment Center

P-46 DNA adductome analysis for human tissues using mass spectrometryYuji IWASHITA¹, Shunsuke OHTSUKA¹, Ippei OHNISHI¹, Yuto MATSUSHITA¹, Takashi YAMASHITA¹, Hideto OCHIAI², Keigo MATSUMOTO², Nobuhito KURONO³, Yoshitaka MATSUSHIMA⁴, Hiroki MORI⁵, Shioto SUZUKI², Shohachi SUZUKI², Fumihiko TANIOKA², Haruhiko SUGIMURA¹¹Department of Tumor Pathology, Hamamatsu University School of Medicine, ²Iwata City Hospital,³Department of Chemistry, Hamamatsu University School of Medicine,⁴Department of Agricultural Chemistry, Tokyo University of Agriculture, ⁵Hamamatsu Medical Center**Organic, biological or computational chemistry of mutagens****P-47 Application of quantum mechanics to QSAR expert review on aromatic amines**Naoki KOYAMA¹, Masayuki MISHIMA², Kiyohiro HASHIMOTO³, Mika YAMAMOTO⁴, Seiichiro KURASHIGE⁵, Chiaki TAKESHITA⁶, Masahiro OGAWA⁷, Hisayoshi OMORI⁸, Katsuya YAMADA⁹, Satsuki CHIKURA¹⁰, Shigeharu MUTO², Soichiro HAGIO¹¹, Fumiya ISHIZUKA¹², Hirofumi OUCHI¹³, Minami HOKI¹⁴, Yusuke NAGATO¹⁵¹Eisai, ²Chugai Pharmaceutical, ³Takeda Pharmaceutical Company, ⁴Astellas Pharma, ⁵EA Pharma,⁶Ono Pharmaceutical, ⁷KUMIAI CHEMICAL, ⁸Taiho Pharmaceutical, ⁹Mitsubishi Tanabe Pharma, ¹⁰Teijin Pharma,¹¹Nissan Chemical, ¹²Nippon Shinyaku, ¹³Japan Tobacco, ¹⁴Nihon Nohyaku, ¹⁵FUJIFILM Toyama Chemical**P-48 xenoBiotic: Ames mutagenicity predictor (2022)**Toshihiko SAWADA^{1,2}, Tomohiro HASHIMOTO², Hiroaki WASADA², Ayato SATO³¹xenoBiotic Inc., ²Faculty of Regional Studies, Gifu University, Tokai National Higher Education and Research System,³Institute of Transformative Bio-Molecules, Nagoya University, Tokai National Higher Education and Research System**Molecular biology of mutagens****P-49 Effects of NEIL1 and NTH1 knockdowns on the action-at-a-distance mutations induced by 8-oxo-7,8-dihydroguanine (8-hydroxyguanine)**

Yoshihiro FUJIKAWA, Tetsuya SUZUKI, Hidehiko KAWAI, Hiroyuki KAMIYA

Department of Nucleic Acids Biochemistry, Graduate School of Biomedical and Health Science, Hiroshima University

P-50 Analysis of the cytotoxic mechanisms of sulforaphaneSakie KOBAYASHI¹, Yuduki SOMEYA², Seiya NISHIBA², Kazuya TORIUMI², Shigeki TAKEDA^{1,2}, Aya KUROSAWA^{1,2,3}¹Sch. Sci. Tech., Gunma Univ., ²Grad. Sch. Sci. Tech., Gunma Univ.,³Gunma Univ. Cent. Food Sci. Wellness, Gunma Univ.

- P-51 Biochemical and genetic evidence for magnesium requirement of tyrosyl-DNA phosphodiesterase 2 in the repair of topoisomerase 1 cleavage complexes**
Masataka TSUDA, Naoto SHIMIZU, Hiroshi IDE
Program of Mathematical and Life Sciences, Graduate School of Integrated Sciences for Life, Hiroshima University
- P-52 The role of DNA polymerase ζ in the replication of non-B DNA**
Yuka HOSODA¹, Tetsuya SUZUKI^{1,2}, Hiroyuki KAMIYA^{1,2}
¹School of Pharmaceutical Sciences, Hiroshima University,
²Graduate School of Biomedical and Health Sciences, Hiroshima University
- P-53 Suppression Mechanism of Deaminated nucleotide-derived genome instability in a thermophilic bacterium *Thermus thermophilus***
Chie MITSUI, Natsumi NAKASHIMA, Miki NISHIMURA, Tatsuo NUNOSHIBA
International Christian University
- P-54 Cigarette sidestream smoke-induced cellular senescence and associated role of histone H2AX**
Yukako KOMAKI, Yuko IBUKI
Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka
- P-55 Understanding the Molecular Mechanism of Innate Immune Response Caused by DNA Repair Deficiency**
Ken TAKAFUJI¹, Koh IWASAKI¹, Yuiko MAYUZUMI¹, Asuka TACHIKAWA¹, Kazuma NAKATANI², Manabu YASUI³, Masamitsu HONMA³, Kei-ichi SUGIYAMA³, Ryoji FUJIKI⁴, Atsushi KANEDA⁴, Kaoru SUGASAWA⁵, Kiyoe URA¹, Akira SASSA¹
¹Graduate School of Science, Chiba University,
²Graduate School of Medical and Pharmaceutical Sciences, Chiba University,
³Division of Genetics and Mutagenesis, National Institute of Health Sciences,
⁴Graduate School of Medicine, Chiba University, ⁵Biosignal Research Center, Kobe University
- P-56 An immunohistochemical analysis with γ H2AX on inactivated DNA polymerase kappa knock-in mice treated with mitomycin C**
Akira TAKEIRI¹, Naoko A WADA¹, Shigeki MOTOYAMA¹, Misaki TANAKA¹, Kenji TANAKA¹, Kaori MATSUZAKI¹, Saori MATSUO¹, Etsuko FUJII¹, Masayuki MISHIMA¹, Kou-ichi JISHAGE², Petr GRÚZ³, Ken-ichi MASUMURA⁴, Takehiko NOHMI⁵, Kei-ichi SUGIYAMA³, Masamitsu HONMA^{3,6}
¹Chugai Pharmaceutical Co., Ltd., ²Chugai Research Institute for Medical Science, Inc.,
³Div. Genetics & Mutag., NIHS, ⁴Div. Risk Assess., NIHS, ⁵Biol. Safety Res. Center, NIHS, ⁶Div. Gen. Affairs, NIHS
- P-57 Investigation of a novel system for validation of protein binding**
Manami KAWASAKI, Mayu YAMASHITA, Arato TAKEDACHI, Isao KURAOKA
Department of Chemistry, Faculty of Science, Fukuoka University
- P-58 Novel plasmids for the fluorescence-based evaluation of DNA mismatch repair in human cells**
Arato TAKEDACHI¹, Tomoki SHIRAKAWA¹, Erina MATSUISHI¹, Shouji MIZUSAKI¹, Tomoki NAGASAWA¹, Ryosuke FUJIKANE^{2,3}, Masumi HIDAKA², Shigenori IWAI⁴, Isao KURAOKA¹
¹Department of Chemistry, Faculty of Science, Fukuoka University,
²Department of Physiological Science and Molecular Biology, Fukuoka Dental College,
³Oral Medicine Research Center, Fukuoka Dental College,
⁴Graduate School of Engineering Science, Osaka University

Carcinogenesis

- P-59 Comprehensive analysis of DNA adducts formed from candidate chemicals for occupational bladder cancer**
Asuka OBIKANE^{1,4,5}, Masami KOMIYA¹, Shugo SUZUKI², Min GI^{2,3}, Hideki WANIBUCHI², Yukari TOTSUKA^{1,6}
¹National Cancer Center Research Institute,
²Molecular Pathology, Osaka Metropolitan University Graduate School of Medicine,
³Environmental Risk Assessment, Osaka Metropolitan University Graduate School of Medicine,
⁴Laboratory of Environmental Hygiene, School of Life and Environmental Science, Azabu University,
⁵Department of Biochemistry Graduate School of Medicine University of Yamanashi, ⁶Nihon University

P-60 Whole-genome sequencing revealed the involvement of c-Myc oncogene in the rat liver tumorigenesis of acetamide

Yuji ISHII¹, Kenji NAKAMURA¹, Shinji TAKASU¹, Norifumi TAKIMOTO^{1,2}, Tatsuya MITSUMOTO¹, Moeka NAMIKI¹, Kumiko OGAWA¹

¹Division of Pathology, National Institute of Health Sciences,

²Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology

Antimutagenesis and anticarcinogenesis**P-61 Azaphilones produced by *Penicillium maximae* with their cell death-inducing activity on Adriamycin-treated cancer cell**

Takahiro MATSUMOTO, Erika OHNISHI, Takahiro KITAGAWA, Tetsushi WATANABE
Kyoto Pharmaceutical University, Department of Public Health

P-62 Analysis of antimutagenicity of quinazoline derivative AK-01 using Bhas 42 cells

Masashi SEKIMOTO¹, Yuri HIGUCHI¹, Moeka NAMIKI¹, Kenji MATSUNO²

¹Department of Environmental Science, School of Life and Environmental Science, Azabu University.,

²Department of Pharmacy, Yasuda Women's University

New technology**P-63 Withdrawal****P-64 Designed Synthesis of Translocated Chromosomes by Genome Editing and Induction of Chromosome Aberrations**

Takayoshi SUZUKI¹, Kohji YAMAKAGE^{1,2}, Manabu YASUI², Akiko UKAI², Yoshinori TSUKUMO¹, Arihiro KOHARA³, Kei-ichi SUGIYAMA²

¹Division of Molecular Target and Gene Therapy Products, National Institute of Health Sciences,

²Division of Genetics and Mutagenesis, National Institute of Health Sciences,

³JCRB Cell Bank, National Institutes of Biomedical Innovation, Health and Nutrition

Regulatory science**P-65 Points to be considered for preparation of SEND data of genotoxicity study**

Naoki TORITSUKA^{1,2}, Konomi IINO^{1,3}, Norio IMAI^{1,4}, Yoshifumi KANEKO^{1,5}, Terukazu KITAHARA^{1,6}, Gen SATO^{1,7}, Hiroyuki NITTA^{1,8}

¹CDISC Japan User Group (CJUG) SEND Team, ²Bristol-Myers Squibb K.K., ³Ina Research Inc.,

⁴DIMS institute of Medical Science Inc., ⁵KYORIN Pharmaceutical Co., Ltd., ⁶Instem Japan K.K., ⁷Eisai Co., Ltd.,

⁸Ono Pharmaceutical Co., Ltd.

Others**P-66 Analysis of photooxidation using a new bisflavin derivative**

Taishu KAWADA¹, Koki AKIYAMA¹, Takanobu KOBAYASHI¹, Katsuhito KINO²

¹Kagawa School of Pharmaceutical Sciences, Tokushima Bunri University,

²Department of Nano Material and Bio Engineering, Faculty of Science and Engineering, Tokushima Bunri University