November 11 (Sat)

8:30

Door Open

8:50 - 9:00 〈A-Building (AB01)〉

Opening Remarks

Isao KURAOKA
President, JEMS 52nd Annual Meeting
Fukuoka University

9:00 - 10:30 〈A-Building (AB01)〉

Symposium 1 Aldehyde storm: new perspectives on biological implications

Chairs: Jun NAKAMURA (Osaka Metropolitan University)
Masanobu KAWANISHI (Osaka Metropolitan University)

S1-1 9:00 **Japanese sensitive to alcohol beverages may be more susceptible to glycidol toxicity**

Jun NAKAMURA[1], Yuya FUJITA[2], Yuki TAKAMI[1], Yuka HIRAKAWA[2], Tomonari MATSUDA[3], Minoru TAKATA[4], Toshiya OKADA[1], Takeshi IZAWA[1], Masanobu KAWANISHI[2]

[1]Osaka Metropolitan University, Graduate School of Veterinary Science, [2]Osaka Metropolitan University, Graduate School of Science, [3]Kyoto University, Graduate School of Engineering, [4]Kyoto University, Graduate School of Biostudies

S1-2 9:20 **Aldehyde-induced premature senescence and DNA damage repair**

Yuko IBUKI, Takashi SUZUKI, Yukako KOMAKI, Momoka AMANO

Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka

S1-3 9:40 **Impact of fatty aldehyde dehydrogenase on maintenance of genome stability**

Wataru SAKAI[1, 2, 3], Tomoya HOTANI[1, 2], Yukie OHTSUKI[1, 2], Motonari GOTO[1, 2], Maiko SASANO[1, 3], Shun MATSUDA[4], Tomonari MATSUDA[4], Taketoshi KAJIMOTO[5], Taro OKADA[5], Masayuki YOKOI[1, 2, 3], Kaoru SUGASAWA[1, 2, 3]

[1]Biosignal Research Center, Kobe University, [2]Graduate School of Science, Kobe University, [3]Faculty of Science, Kobe University, [4]Graduate School of Engineering, Kyoto University, [5]Graduate School of Medicine, Kobe University

S1-4 10:00 **DNA damage and mutations caused by aldehydes**

Tomonari MATSUDA

Graduate School of Engineering, Kyoto University

10:40 - 12:10 〈A-Building (AB01)〉

Symposium 2 Practical evaluation of biological effects related to mutagenicity and carcinogenicity

Chairs: Tatsushi TOYOOKA (National Institute of Occupational Safety and Health, Japan)
Katsuyoshi HORIBATA (National Institute of Health Sciences)

S2-1 10:40 **Biological Effects of Long-term Continuous Low-dose Irradiation**
Kazumi YAMAUCHI
Department of Radiobiology, Institute for Environmental Sciences

S2-2 11:00 **Practical Evaluation of Biological Effects of Particulate Matter Using Animal Experiments**
Shotaro YAMANO
Japan Bioassay Research Center

S2-3 11:20 **Practical Evaluation of Skin Absorption and DNA Damage Potential of Industrial Chemicals**
Tatsushi TOYOOKA
National Institute of Occupational Safety and Health, Japan

S2-4 11:40 **Practical methods and applicability for genotoxicity assessment**
Katsuyoshi HORIBATA
Division of Genetics and Mutagenesis, National Institute of Health Sciences

13:00 - 13:50 〈A-Building (AB01)〉

General Meeting & Awards Ceremony

13:50 - 15:00 〈A-Building (AB01)〉

Award Lecture

Chair: Masami YAMADA (National Defense Academy of Japan)

JEMS Award 2023

AW 13:50 **Various approaches to assess genotoxic potential of drug candidates**
Masayuki MISHIMA
Translational Research Division, Chugai Pharmaceutical

JEMS Service Award 2023

SA 14:10 **Contribution to Environmental Mutagen Research Based on Development of an Analytical Method to Detect Oxidative DNA Damage**
Kazuaki KAWAI
Department of Environmental Oncology, University of Occupational and Environmental Health

JEMS Encouragement Award 2023

EA-1 14:30 **Development of a micronucleus test using rat glandular stomach and colon**
Emiko OKADA
Yakult Central Institute, Yakult Honsha Co., Ltd.

EA-2 14:45 **Development of an error-corrected sequencing-based mutation detection method and its utilization for chemical mutagenicity evaluation**
Shoji MATSUMURA
R&D, Safety Science Research, Kao Corporation

15:10 - 16:40 〈A-Building (AB01)〉

Symposium 3 Genotoxicity Assessment of PAHs and Related Compounds in the Environment --- East Asia Issues

Chairs: Paul A. WHITE (Health Canada)
Yasunobu AOKI (National Institute for Environmental Studies)

Introduction 15:10
Yasunobu AOKI
National Institute for Environmental Studies

S3-1 15:16 **The Benchmark Dose (BMD) Approach for Analysis and Interpretation of Polycyclic Aromatic Hydrocarbon (PAH) and PAH Mixture Mutagenicity Dose-response Data**
Paul A. WHITE[1], Hannah L. BATTAION[1], Alexandra S. LONG[2]
[1]Environmental Health Science & Research Bureau, Health Canada, Ottawa, Canada,
[2]Existing Substances Risk Assessment Bureau, Health Canada, Ottawa, Canada

S3-2 15:46 **Assessment of environmental behaviors and oxidative stress of polycyclic aromatic hydrocarbon quinones in atmospheric particulate matter**
Akira TORIBA, Yumi ABIKO
Institute of Biomedical Sciences, Nagasaki University

S3-3 16:04 **Assessing the cellular oxidative stress induction by exposure to photochemical aging diesel exhaust particles using the air-liquid interface cell exposure method**
Yuji FUJITANI, Akiko FURUYAMA, Go SUZUKI
National Institute for Environmental Studies

S3-4 16:22 **PIG-A gene mutation as a genotoxicity biomarker in occupational exposure of PAHs and related compounds**
Yiyi CAO, Jing XI, Yang LUAN
School of Public Health, Shanghai Jiao Tong University School of Medicine

16:50 - 17:50 〈Hidamari（1F Central Library)〉

Poster Session Core time for odd numbers

November 12 (Sun)

8:30

Door Open

9:00 - 10:30 〈A-Building (AB01)〉

Symposium 4 Health Effects of Titanium Dioxide and Trends in Overseas Regulations

Chairs: Saori FUJISHIMA (Chemicals Evaluation and Research Institute, Japan)
Kiyohiro HASHIMOTO (Takeda Pharmaceutical Co. Ltd.)

S4-1 9:00 **Regulations for Titanium Dioxide**
Tae HAYASHI, Aiko TANABE, Asako FUKUSHIMA
Chemicals Assessment and Research Center

S4-2 9:16 **Titanium dioxide as a food additive**
Atsuko TADA
National Institute of Health Sciences

S4-3 9:32 **Genotoxicity of Titanium Dioxide as a Food Additive**
Kei-ichi SUGIYAMA
Division of Genetics and Mutagenesis, National Institute of Health Sciences

S4-4 9:48 **Potential risks in the cosmetic industry**
Naohiro IKEDA
Safety Intelligence & Research, Product Quality Management, Kao Corporation

S4-5 10:04 **The potential impact of titanium dioxide in the pharmaceutical industry**
Naoki KOYAMA
DHBL, PPD function, BA unit, Global Drug Safety, Eisai Co., Ltd.

10:40 - 12:10 〈A-Building (AB01)〉

Symposium 5 Living Organisms and Mutation

Chairs: Mizuki OHNO (Kyushu University)
Kyoko HIDAKA (The University of Kitakyushu)

Introduction 10:40
Kyoko HIDAKA
The University of Kitakyushu

S5-1 10:50 **Study for de novo germline mutation using DNA repair-deficient mice**
Mizuki OHNO
Department of Medical Biophysics and Radiation Biology, Faculty of Medical Sciences, Kyushu University

S5-2 11:10 **Mutants induced by transposable elements in the Japanese morning glory**
Eiji NITASAKA
Department of Biological Science, Faculty of Science, Kyushu University

S5-3 11:30 **Molecular evolution of Protobothrops genus snakes; perspective with environment**

Takahito CHIJIWA[1], Naoki IKEDA[1], Kento INAMARU[1], Kazuaki YAMAGUCHI[1], Hiroki SHIBATA[2], Naoko ODA-UEDA[3], Shin-ichi YOKOTA[4], Koki TERADA[5]
[1]Faculty of Biology and Life Science, Sojo University ,
[2]Medical Institute of Bioregulation, Kyushu University,
[3]Faculty of Pharmaceutical Sciences, Sojo University,
[4]The Institute of Medical Scinece, The University of Tokyo,
[5]Okinawa Prefectural Institute of Health and Environment

S5-4 11:50 **Human cancer and mutation**

Shinya ODA
Cancer Genetics Laboratory, Clinical Research Institute, NHO Kyushu Cancer Center

13:30 - 14:30 〈Hidamari（1F Central Library)〉

Poster Session Core time for even numbers

14:40 - 15:40 〈A-Building (AB01)〉

Special Lecture Starting point of human DNA Repair

Chair: Arato TAKEDACHI (Fukuoka University)

Introduction 14:40 Isao KURAOKA
Fukuoka University

SL-1 14:45 **Damage and repair of gene in human genetic diseases**

Kiyoji TANAKA
Graduate School of Frontier Biosciences, Osaka University

15:40 - 16:00 〈A-Building (AB01)〉

The Best Presentation Awards Ceremony & Closing Remarks

Poster Session

Poster Discussion :【odd number】2023 November 11 (Sat) 16:50 - 17:50
【even number】2023 November 12 (Sun)13:30 - 14:30

P-1 **Structural analysis and repair mechanisms of DNA damage induced by irradiation**
Toshiaki NAKANO, Ken AKAMATSU, Naoya SHIKAZONO
National Institutes for Quantum Science and Technology (QST)

P-2 **Screening of driver adduct of halogenated hydrocarbons, a causative agent of occupational cholangiocarcinoma**
Shuhei SHIRATORI[1], Masami KOMIYA[1], Min GI[2], Shugo SUZUKI[2], Hideki WANIBUCHI[2], Jiri ZAVADIL[3], Kohei WATANABE[1], Yukari TOTSUKA[1]
[1]Nihon University School of Pharmacy, [2]Osaka Metropolitan University Graduate School of Medicine, [3]International Agency for Research on Cancer (IARC)

P-3 **Exploration of Driver Adducts and Elucidation of Mutagenesis Mechanisms in Alcohol-related Carcinogenesis**
Mina MOTOHASHI[1], Yuuki BETSUYAKU[2], Takeji TAKAMURA[2], Masami KOMIYA[1], Akira SASSA[3], Yukari TOTSUKA[1]
[1]Nihon University, School of Pharmacy, Laboratory of Environmental Toxicology and Carcinogenesis, [2]Kanagawa Institute of Technology, [3]Graduate School of Science, Chiba University

P-4 **Screening of genotoxic compounds that induce DNA double-strand breaks from natural compound library**
Katsuhiro HANADA[1, 2], Yoshihiro NISHIDA[3]
[1]Department of Advanced Medical Sciences, Faculty of Medicine, Oita University, [2]Clinical Engineering Research Center, Faculty of Medicine, Oita University, [3]Department of Obstetrics and Gynecology, Faculty of Medicine, Oita University

P-5 ***De novo* germline mutations induced by acrylamide in *gpt* delta mice and effects on spermatogenesis stage during exposure**
Kenichi MASUMURA[1], Tomoko ANDO[2], Yuji ISHII[3], Kei-ichi SUGIYAMA[2]
[1]Division of Risk Assessment, National Institute of Health Sciences (NIHS), [2]Division of Genetics and Mutagenesis, NIHS, [3]Division of Pathology, NIHS

P-6 **Detection of Genotoxic Reactions Induced by The Alkylating Agent Through Directly Analyzing DNA Damage Responses on Chromatin Fraction**
Saya SASAKI, Kei-ichi SUGIYAMA, Katsuyoshi HORIBATA
Division of Genetics and Mutagenesis, National Institute of Health Sciences

P-7 **Exploring the genotoxicity of the bladder carcinogen BCPN by *gpt* assay and sequencing of mutant colonies**
Yoshiya YAMAMURA, Yuzoh TAKEZAWA, Misaki ABE, Naofumi TAKAHASHI, Chinatsu FUJIWARA, Shinya MIYAZAKI, Kunio WADA
The Institute of Environmental Toxicology

P-8 **Oxidative DNA damage by an active metabolite of COVID-19 therapeutic drug molnupiravir**
Hatasu KOBAYASHI[1], Yurie MORI[1], Yuichiro HIRAO[1, 2], Shinya KATO[3], Sharif AHMED[1], Shosuke KAWANISHI[4], Mariko MURATA[1], Shinji OIKAWA[1]
[1]Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine, [2]Mie Prefectural College of Nursing, [3]Radioisotope Experimental Facility, Advanced Science Research Promotion Center, Mie University, [4]Faculty of Pharmaceutical Science, Suzuka University of Medical Science

P-9 **In vivo mutagenicity analysis in rat liver samples by using ecNGS method**

Kazuki IZAWA[1], Masataka TSUDA[1], Takayoshi SUZUKI[1], Masamitsu HONMA[1, 2], Kei-ichi SUGIYAMA[1]
[1]Division of Genetics and Mutagenesis, National Institute of Health Sciences,
[2]Division of General Affairs, National Institute of Health Sciences

P-10 **In vitro genotoxicity evaluation of advanced nanomaterials**

Rikako ISHIGAMORI[1], Runa SAWADA[1], Manami MAEJIMA[1], Masami KOMIYA[1], Akiko OHNO[2], Yukari TOTSUKA[1]
[1]Laboratory of Environmental Toxicology and Carcinogenesis, School of Pharmacy, Nihon University,
[2]Division of Risk Assessment, Center for Biological Safety and Research, National Institute of Health Sciences

P-11 **Mode of Action Assessment for β-Damascone-Induced Micronucleus Formation in Mammalian Cells Using Antioxidant N-Acetyl-L-Cysteine**

Satoru MUNAKATA, Tomohiro TAKAHASHI, Taku WATANABE, Mayumi ONO, Tsuneo HASHIZUME
Japan Tobacco Inc., Scientific Product Assessment Center

P-12 **The analysis of mutation signature for gamma-irradiation using the *supF*-NGS assay**

Ren IWATA[1], Hidehiko KAWAI[1, 2], Hiroyuki KAMIYA[1, 2]
[1]School of Pharmaceutical Sciences, Hiroshima University,
[2]Graduate School of Biomedical and Health Science, Hiroshima University

P-13 **Development of automatic observation system for miniaturized Ames test (Ames MPF assay)**

Asami MARUCHI, Ryoko MATSUYAMA, Sachiko KITAMOTO, Hiroyuki ASANO
Sumitomo Chemical Co., Ltd.

P-14 **Action-at-a-distance mutations caused by uracil mismatches**

Hiroki TAKATA[1], Tetsuya SUZUKI[1, 2], Yasuo KOMATSU[3], Hiroyuki KAMIYA[1, 2]
[1]School of Pharmaceutical Sciences, Hiroshima University,
[2]Graduate School of Biomedical and Health Sciences, Hiroshima University,
[3]Bioprocess Research Institute, National Institute of Advanced Industrial Science and Technology (AIST)

P-15 **Construction of a cofactor-supplemented *in vitro* micronucleus test system using phase II drug-metabolizing enzymes**

Manabu YASUI[1], Akiko UKAI[1], Shinya SHIBUTANI[2], Honma MASAMITSU[3], Kei-Ichi SUGIYAMA[1]
[1]Div. Genetics and Mutagenesis, National Institute of Health Sciences,
[2]Dept. Pharma. Sci., Stony Brook Univ. Med. Sch., State Univ. of New York,
[3]Div. General affairs, National Institute of Health Sciences

P-16 **Identification of bacteria and workflow of detection of mutations using the nanopore sequencer MinION**

Kohei HIGASHI[1], Takayoshi SUZUKI[2], Masami YAMADA[1]
[1]Department of Applied Chemistry, National Defense Academy,
[2]Division of Genetics and Mutagenesis, National Institute of Health Sciences

P-17 **Evaluation of genotoxicity and carcinogenicity of DEHP by *in vitro* toxicity testing**

Maki NAKAMURA, Yui YOSHIMOTO, Takayuki FUKUDA, Shuichi HAMADA
BoZo Research Center Inc.

P-18 **BMS collaborative study, Comparison of the sensitivity to weak mutagens ; in *Salmonella typhimurium* TA97,TA97a vs TA1537 and *Escherichia coli* WP2*uvrA*/pKM101 vs WP2*uvrA***

Yasuyoshi MIURA[1], Kazushi MATSUMURA[1], Toshiro FUKUSHIMA[1], Kei-ichi SUGIYAMA[2], Katsuyoshi HORIBATA[2], Masayuki KATO[3], Takuya KANNO[4], Atsushi HAKURA[5]
[1]R&D Group, Japan Tobacco Inc.,
[2]Division of Genetics and Mutagenesis, National Institute of Health Sciences,
[3]Formerly affiliated BoZo Research Center Inc., [4]CMIC Bioresearch Center, CMIC Pharma Science Co., Ltd.,
[5]Global Drug Safety, Eisai, Co., Ltd.

P-19 **Variations of urinary 8-hydroxyguanosine, a biomarker of RNA oxidative damage**

Yun-Shan LI, Yuya KAWASAKI, Koichi FUJISAWA, Kazuaki KAWAI
Department of Environmental Oncology, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health

P-20 **Identification of epigenetic effects of a potent tumor promoter TPA using the epi-TK assay**

Haruto YAMADA[1], Mizuki ODAGIRI[1], Manabu YASUI[2], Masamitsu HONMA[2], Kei-Ichi SUGIYAMA[2], Kiyoe URA[1], Akira SASSA[1]
[1]Graduate School of Science and engineering, Chiba University,
[2]Division of Genetics and Mutagenesis, National Institute of Health Sciences

P-21 **Formation of DNA double strand breaks after coexposure to UVA1 and UVB—relationship with cytosolic DNA—**

Mai NARIMICHI, Yukako KOMAKI, Yuko IBUKI
Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka

P-22 **Mechanism of DNA damage induced by myricetin via reactive oxygen species generation**

Yuichiro HIRAO[1, 2], Hatasu KOBAYASHI[1], Yurie MORI[1], Shinya KATO[3], Shosuke KAWANISHI[4], Mariko MURATA[1], Shinji OIKAWA[1]
[1]Department of Environmental and Molecular Medicine, Mie University Graduate School of Medicine,
[2]Department of Home Care Nursing, Mie Prefectural College of Nursing,
[3]Radioisotope Experimental Facility, Advanced Science Research Promotion Center, Mie University,
[4]Faculty of Pharmaceutical Sciences, Suzuka University of Medical Science

P-23 **The role of intracellular enzymatic activity of ribonuclease H2 in genome stability**

Ayano WATANABE[1], Yuiko MAYUZUMI[1], Kazuma NAKATANI[2], Kiyoe URA[1], Eisuke ITAKURA[1], Akira SASSA[1]
[1]Graduate School of Science and Engineering ,Chiba University,
[2]Graduate School of Medical and Pharmaceutical Sciences , Chiba University

P-24 **The effect of blackcurrant extract on photoaging**

Mei YAMAUCHI, Nanami MIURA, Ryousuke KOYAMA, Ayumi YAMAMOTO
National Institute of Technology, Hachinohe College

P-25 **Augmentation of genotoxicity induced by carbon-based nanomaterials with UV-irradiation**

Natsumi MIZOBATA[1], Ayano MIYATA[2], Kotori MIYAI[3], Masanobu KAWANISHI[4]
[1]Department of Biological Chemistry,OsakaMetropolitan University,
[2]Department of Biology,OsakaPrefecture University, [3]Department of Biology,OsakaPrefecture University,
[4]Department of Biological Chemistry,OsakaMetropolitan University

P-26 **Study of TK6 micronucleus test method to assess the genotoxicity of substances containing live bacteria**

Yohei FUJIISHI, Ikuyo MAKINO, Wakako OHYAMA, Kazunori NARUMI, Akinobu KURITA, Emiko OKADA
Yakult Central Institute for Microbiological Research

P-27 **Analysis of somatic mutations in *rpsL*-Tg*/Msh2* deficient mice: A comparison with NGS analysis**

Noriko TAKANO[1], Kyoko HIDAKA[2], Yasunobu AOKI[3], Takehiko NOHMI[4], Yoshimichi NAKATSU[1, 5], Teruhisa TSUZUKI[6], Mizuki OHNO[1]
[1]Faculty of Medical Sciences, Kyushu University, [2]Centre for Fundamental Education, University of Kitakyushu,
[3]Health and Environmental Risk Division, National Institute for Environmental Studies,
[4]Division of Genetics and Mutagenesis, National Institute of Health Sciences,
[5]Clinical Research Institute, National Kyushu Cancer Center, [6]Kyushu University

P-28 **Current Status and Future Prospects of Toxicogenomics Biomarkers**

Takayoshi SUZUKI[1], Chie FURIHATA[2]
[1]Division of Genetics and Mutagenesis, National Institute of Health Sciences,
[2]Division of Molecular Targets & Gene Therapy Products, National Institute of Health Sciences

P-29 **Genome wide detection of low-frequency mutations in plant population mutagenized with gamma ray**

Yoshihiro HASE, Katsuya SATOH, Satoshi KITAMURA
Takasaki Institute for Advanced Quantum Science, National Institutes for Quantum Science and Technology (QST)

P-30 **Genotoxicity evaluation and measurement of spontaneous mutation frequency of colibactin-producing *E. coli* using a DNA repair-deficient strain**

Osamu TSUBOHIRA[1], Ai UESHIMA[1], Yuta HISATOMI[1], Yoshimitsu ODA[1], Yuta TSUNEMATSU[2], Michio SATO[2], Yuichiro HIRAYAMA[2], Noriyuki MIYOSHI[3], Yuji IWASHITA[4], Yuko YOSHIKAWA[5], Haruhiko SUGIMURA[4], Yukari TOTSUKA[6], Keiji WAKABAYASHI[3], Kenji WATANABE[2], Masanobu KAWANISHI[1]

[1]Laboratory of Environmental Molecular Toxicology, Graduate School of Science, Osaka Metropolitan University, [2]Pharmacy Department, University of Shizuoka, [3]Department of Food and Nutrition, University of Shizuoka, [4]Medical Faculty, Hamamatsu University School of Medicine, [5]Veterinary Department, Nippon Veterinary And Life Science University, [6]Pharmacy Department, Nihon University

P-31 **Comparison of base damage and mutation by gamma-rays and carbon ion beam**

Hiroaki TERATO[1], Yuka TOKUYAMA[2], Kanae MORI[2], Midori ISOBE[1]

[1]Department of Radiation Research, Advanced Science Research Center, Okayama University, [2]Department of Instrumental Analysis, Analytical Research Center for Experimental Sciences, Saga University

P-32 **Internal and External Exposure to Cesium-137 Caused Different Biological Reactions at Equal Doses**

Hiroo NAKAJIMA[1], Mizuki OHNO[2], Noriko TAKANO[2], Satoru ENDO[3], Hiroshi ISHIHARA[4]

[1]Osaka University, [2]Kyushu University, [3]Hiroshima University, [4]QST

P-33 **Comparison of the standard Ames test and Enhanced Ames Test for nitrosamine drug substance related impurities**

Takuya KANNO, Kiseki KAWAHARA, Shunsuke NAKAGAWA, Masato HIRAI, Yukiko OZEKI, Hiroyuki KOMATSU, Akihiro KANNO

CMIC Bioresearch Center, CMIC Pharma Science Co., Ltd.

P-34 **Investigation of DNA polymerases that act in the mutagenesis of aristolochic acid in bacteria**

Masami YAMADA, Miyuri FUJII, Daichi KOYABU

Department of Applied Chemistry, National Defense Academy

P-35 **Genotoxicity evaluation of heated tobacco products**

Masami KOMIYA[1], Kotaro HIROTA[1], Taiga YAMAGUCHI[1], Rikako ISHIGAMORI[1], Yohei INABA[2], Yukari TOTSUKA[1]

[1]Department of Environmental Toxicology, School of Pharmacy, Nihon University, [2]Department of Environmental Health, National Institute of Public Health

P-36 **Impact of plasma protein binding rate of chemical substance on *in vitro*/*vivo* micronucleus test results**

Rie TAKAGI, Kaori KIKUCHI, Junya HIRATA, Horobumi ASAI, Naoki YOSHIOKA, Mie AKANUMA

Safety Research Center, KUREHA Corporation

P-37 **Genotoxic studies on aristolochic acid I: an in vitro study using human-induced hepatocytes**

Yushi HU, Yang LUAN

Shanghai Jiao Tong University

P-38 **Plasmid introduction itself increased the levels of DNA damage markers in cultured cells --a case observed in the process of the genotoxicity evaluation of transfected proteins--**

Tsuyoshi YOKOBATA, Katsuya YAMADA, Chinami ARUGA, Kenji WATANABE, Eiji YAMAMURA, Takuya FUJITA

Safety Research Laboratories, Mitsubishi Tanabe Pharma Corporation

P-39 **Effects of endogenous formaldehyde metabolic dysfunction on cells**

Yuka HIRAKAWA[1], Jun NAKAMURA[2], Haruna NAGAYOSHI[3], Minoru TAKATA[4], Masanobu KAWANISHI[1]

[1]Laboratory of Environmental Molecular Toxicology, Graduate School of Science, Osaka Metropolitan University, [2]Graduate School of Veterinary Science, Osaka Metropolitan University, [3]Division of Hygienic Chemistry , Osaka Institute of Public Health, [4]Graduate School of Biostudies, Kyoto University

P-40 **Shape changes of cell nuclei in cultured mammalian cells: a study of cell nucleus distortion (increased roundness)**
Kenji TAKESHITA, Shiunji FURUKUMA, Shigeo KURATA
UBE Scientific Analysis Laboratory, Inc.

P-41 **Antimutagenicity of fruits juice toward MNNG**
Sakae ARIMOTO
Graduate School of Medicine, Dentistry and Pharmacetical Sciences

P-42 **Establishment of an in vitro detection system based on ERK phosphorylation to detect non-genotoxic carcinogens**
Hodaka YAMAMOTO, Misaki TANAKA, Kenji TANAKA, Akira TAKEIRI, Masayuki MISHIMA
Safety and Bioscience Dept., Translational Research Division, Chugai Pharmaceutical Co. Ltd.,

P-43 **Modulatory effects of SP600125 and its structural analogues on AhR activation**
Naoteru DENTA, Ayane IKEDA, Kentaro SHIINA, Masashi SEKIMOTO
Laboratory of Environmental Hygiene, Department of Health and Environmental Sciences, Azabu University

P-44 **State and challenge of expert review of QSAR mutagenicity prediction**
Masayuki MISHIMA
Translational Research Division, Chugai Pharmaceutical

P-45 **Development of *in silico* mutagenicity (Ames test) prediction considering metabolism**
Mika IMAMURA[1], Masakazu TATESHITA[2], Satoshi SUGIYAMA[2], Ryoichi MURAKAMI[2], Yasushi HIKIDA[2], Koji TAKAKU[3]
[1]Safety Evaluation Center, Ecology & Quality Management Division, ESG Division, FUJIFILM Corporation,
[2]Informatics Research Laboratory, ICT Strategy Division, FUJIFILM Corporation,
[3]CRO Business Development Office, FUJIFILM Corporation

P-46 **The construction of prediction model for the unpredictable structures such as primary aromatic amines and aromatic boronic acids in the Ames mutagenicity prediction system 'YosAI'**
Naoki KOYAMA[1], Atsushi HAKURA[1], Masaki KURAKAMI[1], Minetaka ISOMURA[2], Tomoki NISHIOKA[3], Seiji HITAOKA[3], Takeo SASAKI[2], Yusuke NAKATANI[2], Tsubasa NAKAUE[2], Nicolas K SHINADA[4], Sucheendra K PALANIAPPAN[4], Matsuoka YUKIKO[4], Shoji ASAKURA[1]
[1]DHBL, PPD function, BA unit, Global Drug Safety, Eisai Co., Ltd.,
[2]DHBL, PPD function, PST Unit, Eisai Co., Ltd. , [3]Emerging Modality Generation Department, Eisai Co., Ltd. ,
[4]SBX Corporation

P-47 **xenoBiotic: Ames mutagenicity predictor (2023), prediction performance to aromatic amines**
Toshihiko SAWADA[1, 2], Tomohiro HASHIMOTO[1], Hiroaki WASADA[1]
[1]Faculty of Regional Studies, Gifu University, [2]xenoBiotic Inc.

P-48 **Performance evaluation of QSAR software xenoBiotic using quantum chemical calculations**
Kiyohiro HASHIMOTO[1], Toshihiko SAWADA[2]
[1]Drug Safety Research and Evaluation, Takeda Pharmaceutical Co. Ltd., [2]xenoBiotic Inc.

P-49 **Some Topics about N-Nitrosamines -Ames Testing for NDMA and NDEA-**
Ayako FURUHAMA[1], Kei-ichi SUGIYAMA[1], Masamitsu HONMA[2]
[1]Division of Genetics and Mutagenesis, National Institute of Health Sciences (NIHS),
[2]Division of General Affairs, National Institute of Health Sciences (NIHS)

P-50 **Overview of OECD QSAR Assessment Framework (QAF) with a case study**
Ayako FURUHAMA[1], Taeko MARUYAMA-KOMODA[2], Takashi YAMADA[2], Kei-ichi SUGIYAMA[1], Masamitsu HONMA[3]
[1]Division of Genetics and Mutagenesis, National Institute of Health Sciences (NIHS),
[2]Division of Risk Assessment, National Institute of Health Sciences (NIHS),
[3]Division of General Affairs, National Institute of Health Sciences (NIHS)

P-51 **Application of quantum mechanics to QSAR expert review on aromatic amines (2)**

Shigeharu MUTO[1], Ayako FURUHAMA[2], Mika YAMAMOTO[3], Yasuteru OTAGIRI[4], Naoki KOYAMA[5], Seiji HITAOKA[5], Yusuke NAGATO[6], Hirofumi OUCHI[7], Masahiro OGAWA[8], Kisako SHIKANO[8], Katsuya YAMADA[9], Satoshi ONO[9], Minami HOKI[10], Fumiya ISHIZUKA[11], Soichiro HAGIO[12], Chiaki TAKESHITA[13], Hisayoshi OMORI[14], Kiyohiro HASHIMOTO[15], Satsuki CHIKURA[16], Masamitsu HONMA[2], Kei-ichi SUGIYAMA[2], Masayuki MISHIMA[1]
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P-52 **Studies for Mutagenicity-prediction of Aromatic Boronic Acids**

Minetaka ISOMURA, Takeo SASAKI, Yusuke NAKATANI, Tsubasa NAKAUE, Naoki KOYAMA, Atsushi HAKURA, Masaki KURAKAMI, Tomoki NISHIOKA, Seiji HITAOKA
Eisai Co., Ltd.

P-53 **Regulatory trends and considerations in establishment of acceptable intake for nitrosamine drug substance-related impurities (NDSRI)**

Shinji TAMURA
ONO PHARMACEUTICAL CO., LTD.

P-54 **Establishment of the Acceptable Intakes for N-Nitrosamines Using Structure-Activity Relationship/Read Across Approach**

Yusuke NAGATO, Miki ISHINO
FUJIFILM Toyama Chemical Co., Ltd.

P-55 **Nitrosamine Management Challenges in the Pharmaceutical Industry**

Yosuke MINO
Japan Tobacco INC.

P-56 **Towa's approach for the issue of Nitrosamines contamination in drug Products**

Shohei FUKUDA, Kanako KONDO, Shoji FUKUMOTO
TOWA PHARMACEUTICAL

P-57 **Ames test and structure-activity relationship on tricyclic heterocycles**

Masaki KURAKAMI[1], Atsushi HAKURA[1], Rika SATO[2], Akihiro KAWADE[2], Takeshi YAMAGATA[3], Naoki KOYAMA[1], Dai KAKIUCHI[1], Shoji ASAKURA[1]
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[3]Advanced Data Assurance, Eisai Co., Ltd.

P-58 **Detection of metabolites involved in the mechanism of acetamide induced large micronuclei**

Yuji ISHII[1], Norifumi TAKIMOTO[1, 3], Maiko TAHARA[2], Tsuyoshi KAWAKAMI[2], Meili SOMA[1], Shinji TAKASU[1], Kumiko OGAWA[1]
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P-59 **Application of Tracing Evolution of Antibody along time course (TEA-time) to rabbits using single cell analysis with split pool barcoding**

Yuki NISHIJIMA[1], Yuki KOBAYASHI[3], Megumi OKA[1], Yoko AKAZAWA[2], Yoshihisa HAGIHARA[2], Tomonari MATSUDA[1]
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P-60 **Functional diversity and mutation among SVMP isozymes**

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P-61 **Dynamic roles of catalytic residues in base excision repar with hOGG1**

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P-62 **Genetic analysis of the DNA double-strand break induction mechanism of flavonoid quercetin**

Yuduki SOMEYA[1], Shinta SAITO[2], Sakine KOBAYASHI[3], Shigeki TAKEDA[1, 3], Noritaka ADACHI[2], Aya KUROSAWA[1, 2, 3, 4]
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P-63 **Analysis of the cell-killing mechanism of genistein**

Mahiro FUJITA[1], Yuduki SOMEYA[1], Sakine KOBAYASHI[2], Kazuya TORIUMI[1], Shigeki TAKEDA[1, 2], Noritaka ADACHI[3], Aya KUROSAWA[1, 2, 3, 4]
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P-64 **Withdrawal**

P-65 **Visible light induces matrix metalloproteinases expression and subsequent photoaging**

Yosuke HIRAGA[1], Taiki SATO[1], Takahiro HARADA[2], Kazuomi SATO[1, 2]
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P-66 **Roles in the action-at-a-distance mutations of DNA glycosylases involved in the repair of oxidatively damaged bases**

Yoshihiro FUJIKAWA, Tetsuya SUZUKI, Hidehiko KAWAI, Hiroyuki KAMIYA
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P-67 **Genomic instability caused by deaminated nucleotides and its defense system**

Tatsuo NUNOSHIBA[1], Chie MITSUI[1], Akira MURATA[1], Yohei SUGIMOTO[1], Natsumi NAKASHIMA[1], Kenshiro NISHIHARA[1, 2, 3], Miki NISHIMURA[1]
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[3]National Cancer Center Institute for Cancer Control

P-68 **Repair of topoisomerase 1–induced DNA damage by tyrosyl-DNA phosphodiesterase 2 (TDP2) is dependent on its magnesium binding**

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P-69 **Cigarette sidestream smoke-induced cellular senescence and the effect of histone H2AX knockdown**

Yuko IBUKI, Yukako KOMAKI
Graduate Division of Nutritional and Environmental Sciences, University of Shizuoka

P-70 **Mutations induced by 5-hydroxycytosine in human U2OS cells**

Ann HIROTA[1], Tetsuya SUZUKI[1], Shigenori IWAI[2], Hiroyuki KAMIYA[1]
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P-71 **Involvement of uracil DNA glycosylase on the action-at-a-distance mutations by 8-oxo-7,8-dihydroguanine**

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P-72 **Analysis of action-at-a-distance mutations induced by a natural abasic site**

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P-73 **Elucidation of the mechanism of the translesion RNA synthesis of RNA-dependent RNA polymerase of SARS-CoV-2**

Masataka AKAGAWA[1], Petr GRúZ[2], Kaoru SUGASAWA[3], Kiyoe URA[1], Akira SASSA[1]
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P-74 **Analysis of cytotoxic effects caused by the deletion of fatty aldehyde dehydrogenase**

Tomoya HOTANI[1, 2], Yukie OHTSUKI[1, 2], Motonari GOTO[1, 2], Maiko SASANO[1, 3], Shun MATSUDA[4], Tomonari MATSUDA[4], Taketoshi KAJIMOTO[5], Taro OKADA[5], Masayuki YOKOI[1, 2, 3], Kaoru SUGASAWA[1, 2, 3], Wataru SAKAI[1, 2, 3]
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P-75 **Molecular mechanism of genome instability induced by accumulation of ribonucleotides in the genomic DNA**

Asuka TACHIKAWA[1], Yui YOSHIMOTO[2], Ken TAKAFUJI[1], Yuiko MAYUZUMI[1], Kazuma NAKATANI[3], Maki NAKAMURA[2], Takayuki FUKUDA[2], Kaoru SUGASAWA[4], Kiyoe URA[1], Akira SASSA[1]
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P-76 **Construction of new Ames tester strain deficient in the AlkB demethylase**

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P-77 **Identification of molecular pathway for excessive interferon response caused by DNA damage**

Nao TERAKOSHI[1], Ken TAKAFUJI[1], Kazuma NAKATANI[2], Manabu YASUI[3], Masamitsu HONMA[3], Kei-ichi SUGIYAMA[3], Ryoji FUJIKI[4], Atsushi KANEDA[4], Kaoru SUGASAWA[5], Kiyoe URA[1], Akira SASSA[1]
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P-78 **Cleavage of DNA oligomers at a novel guanine oxidation damage by endonuclease VIII**

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P-79 **Replication factor RFC2 directly binds to nucleotide excision repair factor XPF**

Aya YOSHIDA, Akane MATSUMOTO, Isao KURAOKA
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P-80 **Fluorescence detection of non-homologous end joining repair in living cells**

Gakuto FUKUSHIMA, Isao KURAOKA, Arato TAKEDACHI
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P-81 **Base preference of Human EndonucleaseV**

Kazuma MITSUOKA, Isao KURAOKA
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P-82 **Replication factor C interacts with Structure-specific endonuclease ERCC1-XPF**
Akane MATSUMOTO, Arato TAKEDACHI, Isao KURAOKA
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P-83 **Novel reporter plasmid for evaluating DNA mismatch repair proficiency in human cells**
Tomoki SHIRAKAWA[1], Arato TAKEDACHI[1], Erina MATSUISHI[1], Shouji MIZUSAKI[1], Tomoki NAGASAWA[1], Ryosuke FUJIKANE[2, 3], Masumi HIDAKA[2], Shigenori IWAI[4], Isao KURAOKA[1]
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P-84 **Functional regulation of DNA helicase RTEL1 via ubiquitination**
Kosuke MATSUO[1], Remi TAMEDA[1], Hidefumi IWASHITA[1], Yusuke SANADA[2], Shinsuke ITO[3], Isao KURAOKA[1], Arato TAKEDACHI[1]
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P-85 **Quantitative analysis of the mismatch repair using the fluorescent reporter plasmid**
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P-86 **Development of visualization technique for dynamic change in resolution of homologous recombination intermediate**
Masataka TSUDA[1], Naoto SHIMIZU[2]
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P-87 **RGG domain of DHX9 plays pivotal roles in DNA double-strand break repair**
Yuina TSUCHIYA[1], Hayaki IKEGAME[1], Yurina ABE[2], Ryotaro NISHI[1, 2]
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P-88 **Establishment of a novel method for evaluating direct protein-protein binding**
Manami KAWASAKI[1], Mayu YAMASHITA[1], Shinsuke ITO[2], Yusuke SANADA[3], Arato TAKEDACHI[1], Isao KURAOKA[1]
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P-89 **Exploring Cardiac Aging-Associated Mutations Using DNA Repair-Deficient Mice**
Kyoko HIDAKA[1], Sugako OKA[2], Noriko TAKANO[2], Jong-Kook LEE[3], Mizuki OHNO[2]
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P-90 **Sensitivity of human hOGG1-over expressing cells to radiation and oxidative stress**
WeiZhi WANG[1], LanYun YAN[1], Yukihiro YOSHIKAWA[1], Masashi TAKAO[2], QiuMei Zhang AKIYAMA[1]
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P-91 **Analysis of somatic mutations and clonal dynamics of mouse hematopoietic stem cells after whole-body X–irradiation by whole–genome sequencing**
Yukiko MATSUDA[1, 2], Arikuni UCHIMURA[1], Yasunari SATOH[1], Naohiro KATO[3], Masaaki TOSHISHIGE[1], Junko KAJIMURA[2], Kanya HAMASAKI[1], Kengo YOSHIDA[1], Tomonori HAYASHI[1, 2], Asao NODA[1], Osamu TANABE[1, 2]
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P-92 **Chemo-preventive effect of Ki16425 a lysophosphatidic acid receptor inhibitor on estrogen-induced mammary tumor**
Yoshinori OKAMOTO, Akira AOKI, Hideto JINNO
Faculty of Pharmacy, Meijo University

P-93 **Validation of a questionnaire to evaluate specific phases in the menstrual cycle for cancer risk assessment study**

Rie YOSHIDA
Psychiatric Reserch Institute, Midorikai-Healthcare Group

P-94 **DNA polymerase κ suppresses inflammation and inflammation-induced mutagenesis and dysplasia in the colon of mice**

Atsushi HAKURA[1], Hajime SUI[2], Yuki SEKI[1], Jiro SONODA[3], Yusaku YOSHIDA[4], Hisayoshi TAKAGI[4], Shigeo YOKOSE[4], Tomonari MATSUDA[5], Shoji ASAKURA[1], Takehiko NOHMI[6]
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P-95 **Investigation of methylamine dichloramine-derived mechanisms contributing to colitis-associated cancer**

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P-96 **TP53 mutation spectrum in human cancer and germline**

Mao YUKUTAKE
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P-97 **Aberrant DNA Methylation in Arsenic-induced Bladder Carcinogenesis**

Min GI[1], Masaki FUJIOKA[2], Shugo SUZUKI[2], Tomoki YAMAMOTO[2], Arpamas VACHIRAARUNWONG[1], Anna KAKEHASHI[2], Hideki WANIBUCHI[2]
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P-98 **Difference of DNA damage responses after radiation exposure between infants and adults mice: insights from cellular responses**

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P-99 **Development of the error-corrected sequencing-based genotoxicity evaluation method: A collaborative study in JEMS/MMS**

Yuki OTSUBO[1], Sayaka HOSOI[1], Takako HIROSE[1], Shoji MATSUMURA[1], Kazutoshi SAITO[1], Naohiro IKEDA[2], Masaaki MIYAZAWA[1], Naoki KOYAMA[3], Akihiro KAWADE[4], Atsushi HAKURA[3], Dai KAKIUCHI[3], Shoji ASAKURA[3], Yuki OKADA[5], Takafumi KIMOTO[6], Satsuki CHIKURA[5], Yukako MINAMI[5], Junichi NAMEKAWA[5], Takayoshi SUZUKI[7], Kenichi MASUMURA[8], Kei-ichi SUGIYAMA[7]
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P-100 **Reduction of chromosome damage in mouse mini-oocytes freeze-dried after treatment with γ-tocotrienol**

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P-101 **Effects of commonly used pesticides on AhR and drug-metabolizing enzymes**

Mebae KOIKE[1], Saki KANAMARU[1], Minami SHIOZAWA[1], Showa KOMATSU[1], Rikako KARUBE[1], Masanobu KAWANISHI[2], Sayoko HARASHIMA[2], Takashi YAGI[2], Kazuhiro SHIIZAKI[1]
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P-102 **Air Pollution and Endocrine Disruption:Evaluation by Yeast Reporter Assay**

Yuto HANAICHI[1], Sayoko HARASHIMA[2], Yuya FUJITA[2], Honami ONISHI[2], Kentaro MORI[2], Mami MATANO[2], Norio ITO[3], Takashi YAGI[1], Masanobu KAWANISHI[1]
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P-103 **The evaluation of DNA damage caused by particulate matters in the respiratory system**

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P-104 **Evaluation of the generation and properties of extracellular vesicles in pulmonary allergic inflammation exacerbated by particulate matter**

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P-105 **Prenatal exposure to organophosphate flame retardants and birth outcomes**

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P-106 **Evaluation of agonist and antagonist activity of pesticides and other chemicals using yeast express human thyroid hormone receptors**

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P-107 **Induction of epithelial/inflammatory cytokines by PM_{10}**

Tetsushi WATANABE[1], Daisuke KAWAKAMI[1], Mayu HAYASHI[1], Io NOBUKIYO[1], Fumika YANO[1], Takahiro MATSUMOTO[1], Nobuyuki YAMAGISHI[2]
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P-108 **RNA sequence analysis for cells exposed to polycyclic aromatic compounds exhibiting tumor-promoting activity**

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P-109 **A new radiation hormesis theory based on chemical reaction kinetics**

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P-110 **Elucidating the mechanism of COVID-19 exacerbation by particulate matters targeting the respiratory epithelial system**

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P-111 **Editing of involving multiple substitution, deletion, and insertion mutations using 5'-tailed duplex**

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P-112 **Detection of mouse antibody isotypes against ultrapure oxidation specific epitopes**

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P-113 **JEMS・MMS collaborative study, thresholds for mutagens: Hormetic responses in the micronucleus test**

Shizuyo SUTOU[1], Akiko KOEDA[2], Kana KOMATSU[2], Toshiyuki SHIRAGIKU[3], Hiroshi SEKI[4], Toshiyuki KUDO[1]
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