第22回日本動物実験代替法学会
総会・学術大会　要旨集

Abstracts of the 22nd Annual Meeting
The Japanese Society for Alternatives to Animal Experiments

2009 年 11 月 13 日(金) ～ 15 日(日)
大阪大学 銀杏会館（吹田キャンパス医学部研究棟北側）

大会長　黒　澤　　努
大阪大学大学院医学系研究科 実験動物医学教室

November 13th (Friday) - 15th (Sunday), 2009
Icho Kaikan, Osaka University (Suita Campus)

Congress President :
Tsutomu Miki Kurosawa, DVM, M.Phil, Ph.D. DVCS, DJCLAM
The Institute of Experimental Animal Sciences
Osaka University Medical School

22nd Annual Meeting

	12th (Thu)		13th (Fri)				14th (Sat)			15th (Sun)	
	Room C	Room D/E	Hall	Poster	Room C	Room D/E	Hall	Poster	Room D/E	Hall	Room D/E
9:00				Poster Session		Exhibits 9:00～17:00	Oral Session 2 9:00～10:00		Exhibits 9:00～17:00	Symposium 3 Drug Development and 3Rs 9:00～11:00	Exhibits 9:00～12:00
10:00			Symposium 1 Project of NEDO 9:30～11:00				Special International Session 10:00～12:50				
11:00				Presentation 11:00～13:00	Council Meeting 11:00～13:00					Symposium 4 Lab Animals Science 11:00～12:30	Carry out
12:00										Luncheon Seminar 12:30～13:30	
13:00			Oral Session 1 13:00～14:00				General Meeting 13:00～14:00			Challenge 13:30～15:00	
14:00			Mandom Reports 14:00～15:00				Symposium 2 ES, iPS cells Symposium with JTCA 14:00～17:45				
15:00	Board of Directors 15:00～18:00		Japan China Korea International Symposium 15:00～18:00							Public Seminar 15:00～17:00	
16:00		Carry the exhibits									
17:00								Over			
18:00			Reception 18:00～20:00				Social Gathering 18:00～20:00 「KUZIRA-YA」				
19:00			Restaurant 「Minerva」								
20:00											

Special International Session (Nov 14, Sat.) 10:00－12:50

Contemporary Topics 1 (Nov 14, Sat.) 10:00－10:35

Chair person Atsushige Sato（Tokyo Medical & Dental Univ.）

CT－1 Introduction of KoCVAM for Alternative Test Methods in Korea

Soon Young Han[1,2]
[1]KoCVAM Director, [2]Toxicological Evaluation and Research Department, National Institute of Food and Drug Safety Evaluation, Korea Food and Drug Administration

Special Lecture (Nov 14, Sat.) 10:30－11:30

Chair person Tsutomu Miki Kurosawa（Osaka Univ.）

SL Advancing Laboratory Animal Welfare and Public Health Science: The Role of Innovative Refinement, Reduction, and Replacement Strategies

William S. Stokes
National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods, National Institute of Environmental Health Sciences, National Institutes of Health, Research Triangle Park, North Carolinal, USA

Contemporary Topics 2 (Nov 14, Sat.) 11:50－12:20

Chair person Makoto Hayashi（Biosafety Research Center Food, Drugs and Pesticides)

CT－2 Revision of EU Council Directive 86/69/EEC on animal experimentation: an overview of its impact on animal welfare and science

Coenraad F.M.Hendriksen
Netherlands Vaccine Institute (NVI), Nilthoven, The Netherlands & Netherlands Centre Alternatives to Animal Use (NCA), Utrecht University, The Netherlands

Contemporary Topics 3 (Nov 14, Sat.) 12:20－12:50

Chair person Yuko Okamoto（KOSÉ Corp.）

CT－3 Three-Dimensional Reconstructed Human Tissue Models:Current Status of Regulatory Acceptance and Industrial Use

Roger Curren
Institution for In Vitro Sciences,Inc.

（Thank you very much for the contributors offer to organize this session）

Symposium 1 (Nov 13, Fri.) 9:30－11:00

Chair persons Noriho Tanaka（Hatano Research Institute, Food and Drug Safety Center）, Hajime Kojima (National Institute of Health Sciences)

S1－1 Chemical management policy and development of short-term hazard assessment methods

Takuya Igarashi
New Energy & Industrial Technology Development Organization (NEDO)

S1－2 The Bhas 42 cell transformation assay: from basic researches to a guideline

Kiyoshi Sasaki[1], Dai Muramatsu[1], Shoko Arai[1], Nobuko Endou[1], Sachiko Kuroda[1], Kumiko Hayashi[1], Ayako Sakai[1], Shojiro Yamazaki[1], Yeon-mi Lim[1], Makoto Umeda[1], Masanori Wada[2], Noriho Tanaka[1]
[1]Div. of Alternative Research, Food and Drug Safety Center, [2] ABLE

S1－3 Immunotoxicity: Development of a reporter gene assay system using human cell lines

Setsuya Aiba, Rumiko Saito, Yutaka Kimura, Ai Memezawa, Ikuko Numata, Toshiya Takahashi
Department of Dermatology, Tohoku University Graduate School of Medicine

S1－4 Development of novel alternative tests for developmental toxicity:
1) Reporter gene assays using murine ES cells

Koichi Saito, Noriyuki Suzuki, Satoshi Ando Nobuyuki Horie
Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd.

S1－5 Improvement of the embryo culture method for developmental toxicity tests

Masaharu Akita[1], Noriko Ishizuka[2] , Atsushi Yokoyama[3]
[1]Dept. of Nutrition and Dietetics, Kamakura Women's University,
[2]Dept. of Nutrition, Kiryu University,
[3]Life Science Laboratory of Kanagawa

Symposium 2 (Nov 14, Sat.) 14:00－17:45

Co-sponsoring symposium with the Japanese Tissue Culture Association

Chair persons Miho Kusuda Furue（National Institute of Biomedical Innovation ）, Isao Asaka（Kyoto Univ.）, Yasuyuki Sakai（Tokyo Univ.）, Koichi Imai（Osaka Dental Univ.）

Opening （Chair persons）

S2－1 Standardization of human ES and iPS cells for drug discovery

Miho Kusuda Furue[1,2]
[1]JCRB Cell Bank, Laboratory of Cell Cultures, Division of Bioresources, National Institute of Biomedical Innovation,
[2]Laboratory of Cell Processing, Institute for Frontier Medical Sciences, Kyoto University

S2－2 Establishment of Disease-specific iPS Cells and Challenges in The Standardization.

Isao Asaka
Center for iPS Cell Res. Appl., Kyoto Univ.

S2－3 Development of a novel drug toxicity testing system using human iPS cells

Hiroyuki Mizuguchi[1,2]
[1] Lab. of Gene Transfer and Regulation, National Institute of Biomedical Innovation, [2] Dept. of Biochemistry and Molecular Biology, Graduate School of Pharmaceutical Sciences, Osaka Univ.

S2－4 Human ES cell-derived cellular models for drug discovery and development

Kazuhiro Aiba
Stem Cell and Drug Discovery Institute

S2－5 Application of ES cells to toxicology
- Current status and expected utilization: heart toxicity -

Tadahiro Shinozawa
Development Research Center, Pharmaceutical Research Division, Takeda Pharmaceutical Company Limited

S2－6 A novel embryotoxic estimation method of drugs using ES cells differentiation system

Shinji Kusakawa, Akito Tanoue
Department of Pharmacology, National Research Institute for Child Health and Development

S2－7 Regenerative tissues derived from stem cells and its application to pharmacological research

Yasuhiro Ogawa, Kazuhiko Oishi
Dept. of Pharmacology, Meiji Pharmaceutical Univ.

S2－8 Evaluating system using cells derived from ES/iPS cell
-Application of Cardiomyocite to safety evaluation of a medical device and quality evaluation of crude drug-

Yasuhiro Takagi, Sumiko Kawai, Kaori,Tsutomu Miki Kurosawa
The Inst. of Experimental Animal Sci., Osaka Univ. Med. Sch

S2－9 Alternatives to animal experimentation using ES/iPS cells
- Improvement of the EST -

Koichi Imai
Dept. of Biomaterials, Osaka Dental Univ.

Discussion

Symposium 3 (Nov 15, Sun.) 9:00－11:00

Chair persons Yasuo Ohno (National Institute of Health Sciences), Takashi Unno (Safety Evaluation Forum)

S3－1 Introduction

Takashi Unno
Safety Evaluation Forum

S3－2 Better safety evaluation using human and rat hepatocytes in spheroids as an *in vitro* model

Hisakazu Iwai
Safety Evaluation Forum Sanwa Kagaku Kenkyusho Co., Ltd.

S3－3 Use of *in silico* tool in the research and development of pharmaceuticals

Ichiro Naeshiro
Strategic Research Planning Dept.,
Pharmaceutical Research Division,
Takeda Pharmaceutical Company Limited

S3－4 Prediction of Embryotoxicity by Embryonic Stem Cell Test

Norihito Matsumoto
Investigative toxicology research group,
Discovery technology laboratory,
Ono Pharmaceutical Co., Ltd.

S3－5 Contribution of ICH on 3Rs in alternatives to animal experiments

Yasuo Ohno
National Institute of Health Sciences

Discussion

Symposium 4 (Nov 15, Sun.) 11:00－12:30

Chair persons　Tsutomu Miki Kurosawa（Osaka Univ.）,
Tadao Serikawa（Kyoto Univ.）

S4－1　Policy on animal experimentation of JALAS and alternatives to animal experiments

Tadao Serikawa
President of Japanese society for laboratory animal science
Inst. of Lab. Animals, Grad. Sch. of Med., Kyoto Univ.

S4－2　Contribution of experimental animal technologist to Refinement and Reduction

Yuji Sakamoto
Vice-president of The Japanese Association for Experimental Animal Technologists.
Senju Pharmaceutical Co., Ltd.

S4－3　Activities related to the 3Rs in the Japanese Society for Laboratory Animals and the Environment

Seigo Shumiya
President of Japanese Society for Laboratory Animals and the Environment

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International symposium (Japan, China and Korea)
(Nov 13, Fri.) 15:00－18:00

Chair persons　Isao Yoshimura (Science Univ. of Tokyo),
Masaharu Akita (Kamakura Women's Univ.)

IS－1　Introduction of animal welfare education in colleges of veterinary medicine of Korea

Jae-Hak Park
Soeul National University

IS－2　The Current Status of 3Rs Research in China

Yue bingfei
National Institute for the Control
of Pharmaceutical and Biological Products.
Beijing. China

IS－3　Alternatives in China: Today and Tomorrow

Qiu Lu
Shanghai Entry-Exit Inspection and
Quarantine Bureau of the P. R. China

IS－4　Development status of the laboratory animal industry in Beijing area

Lin Jianwei
Beijing Administrative Office of Laboratory Animal

IS－5　Bioartificial skin and cornea as screening models

Young Sook Son
Department of Genetic Engineering,
College of Life Science
Kyung Hee University

Luncheon seminar

(Nov 15, Sun., 12:30－13:30，Offer of Natsume Seisakusho Co.,Ltd.)

Chair person Teppei Ogawa (Natsume Seisakusho Co.,Ltd.)

LA－1 Alternatives and Anesthesia

Tsutomu Miki Kurosawa
Laboratoy for Laboratory Animal Medicine,
Osaka Univ. Med. Sch.

LA－2 The function of NARCOBIT - the inhalation anesthesia system for small laboratory animals.

Masaaki Inoue
S.K.I.Net,Inc.

Luncheon seminar: The box lunch ticket is issued for the first 150 persons at the reception from 8:50 Sunday.

The 1st International Research Promotion Session of Alternative Animal Experiments by Mandom Corp. (Nov 13, Fri.) 14:00－15:00

M-1 Jae-Hak Park
Dept. of Laboratory Animal Med., College of Veterinary Medicine, Seoul National Univ.

M-2 Kenji Sugibayashi
Josai Univ.

M-3 Jeong-Ik Lee
Tokai Univ.

M-4 Tsutomu Miki Kurosawa
Osaka Univ.

(Please see the separate volume)

Challenge contest

(Nov 15, Sun.) 14:00－15:00 Free

(Please see the separate volume)

Public Seminar

(Nov 15, Sun.) 15:00－17:00 Free

Chair person Tsutomu Miki Kurosawa（Osaka Univ.）

PS-1 Kiyonori Nishida
Osaka Aquarium KAIYUKAN

PS-2 Nobuhiko Hishi
Kobe Univ.

General Session (Oral Session 1, Nov 13, Fri. 13:00－14:00)

Chair persons　Hidenobu Okumura (NOEVIA Co.,Ltd.),
Takashi Ohmori (Kyoto Univ.)

O1－1　Availability of silkworm infection model for identification of environmental pathogens and virulence factors

Kimihito Usui[1], Shinya Miyazaki[1], Chikara Kaito[1], Kazuhisa Sekimizu[1, 2]
[1]Laboratory of Microbiology, Grad. Sch. Pharm. Sci. Univ. of Tokyo,
[2]Genome Pharmaceutical institute Co., Ltd.

O1－2　Investigation of the Test Method for Eye Irritation potential Using a Reconstructed Human Corneal Model

Masakazu Katoh, Fumiyasu Hamajima,
Takahiro Ogasawara, Kenichiro Hata
Japan Tissue Engineering Co., Ltd.

O1－3　Genotyping Using Amp-FTA Method With Buccal Swab sample

Satoshi Nakanishi, Takashi Kuramoto, Tadao Serikawa
Institute of Laboratory Animals, Graduate School of Medicine,
Kyoto University, Kyoto

O1－4　Embryonic stem cell-derived hepatic tissue micro-culture system

Sungho Ahn[1], Miho Tamai[1], Yu Toyoda[1, 2], Hisashi Okuyama[1],
Toshihiro Akaike[1], Takayuki Shindo[3], Yoichi Fujiyama[4],
Eiichi Ozeki[4], Yoh-ichi Tagawa[1, 5, 6]
[1]Tokyo Tech., Grad. School of Biosci. and Biotech., [2]JSPS Research Fellow,
[3]Shinshu Univ., Grad. School of Medicine, [4]SHIMADZU CORP.,
[5]Tokyo Tech., FCRC., [6]JST PREST

General Session (Oral Session 2, Nov 14, Sat. 9:00－10:00)

Chair persons　Hiroshi Itagaki (Shiseido Co.,Ltd.),
Takashi Sozu (Osaka Univ.)

O2－1　The characteristics of a Bhas 42 cell transformation assay and its predictability for the carcinogenicity of chemicals

Ayako Sakai, Kiyoshi Sasaki, Dai Muramatsu, Shoko Arai, Nobuko Endou,
Sachiko Kuroda, Kumiko Hayashi, Yeon-mi Lim,
Shojiro Yamazaki, Makoto Umeda, Noriho Tanaka
Laboratory of Cell Carcinogenesis,
Hatano Research Institute, Food and Drug Safety Center

O2－2　Investigation of a Minimally-Required Size for a Two-Dimensional Liver Micro-Tissue toward *In Vitro* Toxicity Tests

Kikuo Komori, Ippei Kameda, Tetsu Tatsuma, Yasuyuki Sakai
Institute of Industrial Science, University of Tokyo

O2－3 Inter-laboratory validation study of in vitro eye irritation test; Short time Exposure (STE) test

H. Sakaguchi[1], N. Ota[2], T.Omori[3], H. Kuwahara[4], T. Sozu[5], Y. Takagi[6], Y. Takahashi[1], K. Tanigawa[7], M. Nakanishi[7], T. Nakamura[8], T. Morimoto[9], S. Wakuri[10] Y. Okamoto[7], M. Sakaguchi[2], T. Hayashi[4], T. Hanji[6], S. Watanabe[81]Kao Corporation, [2]Pola Chemical Industries, INC., [3]Kyoto University, [4]Kanebo cosmetics INC., [5]Osaka University, [6]Pias Corporation, [7]KOSÉ Corporation, [8]LION Corporation, [9]Sumitomo Chemical Co., Ltd., [10] FDSC

O2－4 Classification for skin sensitization potency using human Cell Line Activation Test (h-CLAT)

Yuko Nukada[1], Takao Ashikaga[2], Takayuki Abo[1], Sakiko Sono[2], Hitoshi Sakaguchi[1], Hiroshi Itagaki[2], Naohiro Nishiyama[1] [1]Kao Corporation, [2]Shiseido Co., Ltd.

General Session (Poster)

Poster session, 13, Fri. 11:00～13:00,
Posted period, 13, Fri. 9:00－14, Sat. 17:00

P－1 Cardiotoxicity evaluation of the anticancer drug using chick embryo

Hiroyuki Miyazaki, Toshimi Iizuka, Motohiro Okayasu, Toshio Kouzuki, Takeshi Homma, Takashi Ogura, Yohei Inada, Akane Kakuyama, Takenori Tamaki, Tomoko Miyazaki, Miyoshi Kido, Yuji Yoshiyama
Center for Clinical Pharmacy and Clinical Sciences, Kitasato University School of Pharmacy

P－2 Development of non-aqueous peptide binding assay for *in vitro* skin sensitization test

Teppei Nawa, Kazuhiro Hara, Masahito Usami, Masanao Niwa
Hoyu Co., Ltd

P－3 The agreement of assay results between a 6-well method and a 96-well method in the Bhas 42 cell transformation assay

Shoko Arai, Kiyoshi Sasaki, Ayako Sakai, Dai Muramatsu, Nobuko Endou, Shojiro Yamazaki, Yeon-mi Lim, Makoto Umeda, Noriho Tanaka
Division of Alternative Research, Food and Drug Safety Center

P－4 A Genotoxicity test system based on p53R2 gene expression in normal human skin cells.

Taisei Mizota, Katsutoshi Ohno, Toshihiro Yamada
The Food Safety Research Institute, Nissin Foods Holdings Co., Ltd.

P－5 Validation of an in vitro screening test for predicting the tumor promoting potential of chemicals based on gene expression

Hideki Maeshima, Katsutoshi Ohno, Toshihiro Yamada
The Food Safety Research Institute,

P－6 The value of hepatotoxicity assessment using primary cultured human hepatocytes

Yoshifumi Takenobu
Investigative toxicology research group, Discovery technology Laboratory, Ono pharmaceutical Co., Ltd.

P－7 Review of an alternative to animal testing for safety evaluation of Quasi-drug

Hajime Kojima[1], Masafumi IIjima[2], Kayoko Matsunaga[3], Hitoshi Sasa[4], Hiroshi Itagaki[4], Yuko Okamoto[5], Naohiro Nishiyama[6], Hiroshi Onodera[7], Iku Mita[7], Jun Washida[8], Koichi Masuyama[8], Mitsuteru Masuda[1], Yasuo Ohno[1]
[1]National Institute of Health Sciences, [2]Showa University, [3]Fujita Health University, [4]Shiseido Co. Ltd., [5]KOSE Corporation, [6]KAO Corporation, [7]Pharmaceuticals and Medical Devices Agency, [8]Ministry of Health, Labour and Welfare

P－8 Validation of LabCyte EPI-MODEL24, an *In Vitro* Assay for Detecting Skin Irritants

Hajime Kojima [1], Yoko Ando [2], Yoshihiro Yamaguchi [3], Tadashi Kosaka [4], Tamie Suzuki [5], Atsuko Yuasa [6], Yukihiko Watanabe [7], Shinsuke Shinoda [8], Kenji Idehara [9], Isao Yoshimura [10], Etsuyoshi Miyaoka [10], Kenya Ishiyama [10], Masakazu Kato [11], Takashi Omori [12], NIHS[1], Aiken Co., Ltd.[2], KOBAYASHI Pharm. Co., Ltd.[3], Inst. of Environmental Toxicology[4], Fancl Res. Inst.[5], FUJIFILM Corp.[6], Maruishi Pharm. Co., Ltd.[7], Drug Safety Testing Center Co., Ltd.[8], Daicel Chemical Industries, Ltd.[9], Tokyo Univ. of Science[10], J-TEC[11], Kyoto Univ.[12]

P－9 An On-line Community of Stakeholders Interested in Non-animal Methods of Toxicity Testing

[1]AltTox.org

P－10 JaCVAM statement on new alternatives to animal testing

Hajime Kojima[1], Tohru Inoue[1], Mitsuteru Masuda[1], Masaharu Akita[2], Yasuo Ohno[1]
[1]JaCVAM Steering Committee, National Institute of Health Science (NIHS), [2]Kamakura Women's University

P－11 Investigation of sensitive cytotoxicity assay detecting drug-induced mitochondrial toxicity

Eriko Toudou
Investigative toxicology research group, Discovery technology laboratory, Ono Pharmaceutical Co., Ltd.

P－12 Bile Canalicular Formation and Hepatobiliary Transport are Enhanced in Hepatocyte Sandwich Culture on an Oxygen-permeable Polydimethylsiloxane Membrane.

Hitoshi Matsui[1, 3], Fanny Evenou[1], Masaru Sekijima[3], Teruo Fujii[2], Shoji Takeuchi[2], Yasuyuki Sakai[2]
[1]BEANS Laboratory, [2]Inst. of Ind. Sci., Univ. of Tokyo, [3]Mitsubishi Chemical Medience Co., Ltd.

P－13 Evaluation of three dimensional cultured skin models using membrane permeation test

Kenji Sugibayashi[1], Hiroaki Todo[1]
[1]Faculty of Pharmaceutical Sciences, Josai University

P－14 Development of a human corneal epithelium model utilizing a collagen vitrigel membrane and its application to eye irritation test

Kazunori Nishikawa[1, 2], Tomoko Yamamoto[1], Pi-Chao Wang[2], Toshiaki Takezawa[11]Transgenic Animal Research Center, National Institute of Agrobiological Sciences, [2]College of Agrobiological Resource Sciences, University of Tsukuba

P－15 Reproducibility of human 3-dimensional cultured epidermal model (LabCyte EPI-MODEL)

Fumiyasu Hamajima, Masakazu Katoh, Takahiro Ogasawara, Kenichiro Hata
Japan Tissue Engineering Co., Ltd.

P－16 The Skin Irritation Test using the Human Epidermal Model LabCyte EPI-MODEL24 : examination with 54 materials

Takahiro Ogasawara, Masakazu Katoh, Fumiyasu Hamajima, Ken-ichiro Hata
Japan Tissue Engineering Co., Ltd.

P－17 Statistical Issues in the Design and Analysis of Validation Studies

Takashi Sozu[1], Takashi Omori[2], Isao Yoshimura[3]
[1]Osaka University, [2]Kyoto University,
[3]Tokyo University of Science

P－18 The effect of chemical compound on cultured rat embryos in S-9mix

Noriko Ishizuka[1], Masaharu Akita[2], Atushi Yokoyama[3]
[1]Kiryu University, [2]Kamakura Women's University, Japan,
[3]Kanagawa Life Science Research Laboratory

P－19 Evaluation of eye irritation potential of 114 chemicals and orrespondence to GHS classification using in vitro Short Time Exposure STE) test.

Kazuhiko Hayashi[1], Yutaka Takahashi[1], Mirei Koike[1], Hitoshi Sakaguchi[1],
Takumi Hayashi[2], Hirofumi Kuwahara[2], Naohiro Nishiyama[1]
[1]Kao Corporation, [2]Kanebo cosmetics INC.

P－20 Skin Sensitization Study by Quantitative Structure-Activity Relationships

Kazuhiro Sato[1], Tomohiro Umemura[1], Yukinori Kusaka[1], Kohtaro Yuta[2]
[1]Department of Environmental Health, School of Medicine, University of Fukui.
[2]Fujitsu Limited (Present; National Institute for Environmental Studies)

P－21 Direct prediction of toxicity scores using the data obtained from an alternative test: A prediction model

Takashi Omori[1]
[1]Kyoto University School of Public Health

P－22 Whole embryo culture with minivaial on rat embryo of day 9.5.

Yokoyama Atsushi[1, 3], G.B.Vertrich[3], Hiroshi Yokoyama[3] , Masaharu Akita[2]
[1]Kanagawa Life-Sciense Research, [2]Kamakura woman's college,
[3]Baltimore Life-sciense research

P－23 Evaluation of heterotypic cellular interactions using detachable substrates under controlled flow conditions

T. Kawashima[1], T. Yokoi[1], H. Kaji[1, 2], T. Abe[1, 2], M. Nishizawa[1, 2]
[1]Tohoku University, [2]JST-CREST

P－24 The international validation study for the ER alpha STTA Antagonist Assay using HeLa9930

Atsushi Ono[1], Masahiro Takeyoshi[2], Susanne Bremer[3],
Miriam Jacobs[4], Susan C. Laws[5], Takashi Sozu[6], Hajime Kojima[1]
[1]JaCVAM, NIHS, [2]CERI, [3]ECVAM, [4]EFSA,
[5]US-EPA, [6]MEI center, Osaka Univ.

P－25 Construction of a three-dimensional heterogeneous micro-tissue toward the evaluation of a minimum required size

H. Suzuki, H. Kimura, K. Komori, T. Fujii, Y. Sakai
Institute of Industrial Science, University of Tokyo

P－26 A combined test skin irritation evaluation: Monolayer cell, human skin model tests and human patch test

Maki Nakamura[1], Yamaguchi Yoshihiro[1], Li Xiaolin[2],
Li Jian[2], Xiong Wei[2], Qiu Lu[2]
[1]Kobayashi Pharmaceutical Central R&D Laboratory,
[2]Shanghai Entry-Exit Inspection and Quarantine Bureau of the P. R. China

P－27 Evaluating system using cells derived from ES/iPS cell - Movie image analysis of beating cardiomyocyte-

Yasuhiro Takagi[1], Sumiko Kawai[1], Kaori Yabuuchi[1], Karin Shimada[1], Ayaka Iwao[1],
Yuko Kotani[1],Ryoji Hashiba[1],Kyoko Shioya[2],Masaru Tajima[1]
and Tsutomu Miki Kurosawa[1]
[1]The Inst. of Experimental Animal Sci., Osaka Univ. Med. Sch.,
[2] National Cardiovascular Center, Research Inst. Laboratory Animal Unit

P－28 Evaluating system using cells derived from ES/iPS cell - Microscopic observations for the differentiated multilayered cardiomyocyte -

Kaori Yabuuchi[1], Sumiko Kawai[1], Yasuhiro Takagi[1], Yuko Kotani[1],
Ryoji Hashiba[1], Kyoko Shioya[2], Masaru Tajima[1],
Tsutomu Miki Kurosawa[1]
[1]The Inst. of Experimental Animal Sci., Osaka Univ. Med. Sch.,
[2] National Cardiovascular Center, Research Inst. Laboratory Animal Unit

P－29 Evaluating system using cells derived from ES/iPS cell - Inspection of cardiomyocyte toxicity by index chemicals -

Sumiko Kawai[1], Yasuhiro Takagi[1], Kaori Yabuuchi[1], Yuko Kotani[1],
Ryoji Hasiba[1], Kyoko Shioya[2], Masaru Tajima[1],
Tsutomu Miki Kurosawa[1]
[1]The Inst. of Experimental Animal Sci., Osaka Univ. Med. Sch.,
[2] National Cardiovascular Center, Laboratory Animal Unit.

P－30 Evaluating system using cells derived from ES/iPS cell -Application to a screening method of crude drug constituting a Chinese medical prescription-

Yasuhiro Takagi[1], Sumiko Kawai[1], Kaori Yabuuchi[1], Yuko Kotani[1],Ryoji Hashiba[1],
Kyoko Shioya[2],Masaru Tajima[1] and Tsutomu Miki Kurosawa[1]
[1]The Inst. of Experimental Animal Sci., Osaka Univ. Med. Sch.,
[2] National Cardiovascular Center, Research Inst. Laboratory Animal Unit

P－31 Analysis of marker genes for prediction of embryotoxicity in neural differentiation using mouse embryonic stem cells

Noriyuki Suzuki, Satoshi Ando, Nobuyuki Horie, Koichi Saito
Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd.

P－32 Development of in vitro alternative method for developmental toxicity using mouse embryonic stem cells

Noriyuki Suzuki, Nobuyuki Horie, Satoshi Ando, Koichi Saito
Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd.

P－33 Investigation of an Eye Irritation Test Using a Human 3D Corneal Model

Satoshi Nakahara
Central Research Laboratories, Mandom Corporation

P－34 Training in anatomy using Japanese flying squid for college students majoring in nutrition and food –To increase the learning effects of clinical training in rat anatomy –

Michiko Sakamoto, Yukiko Nomura
Faculty of Food and Nutrition, Kyushu Nutrition Welfare University

P－35 Expansion of Short Time Exposure (STE) Test :Solvent Study

Mayumi Sakaguchi, Tomoko Kasahara, Shigemi Kinoshita,
Akio Shibamoto, Keiji Nishizumi, Naoko Ota

P－36 The influence of culture days of the reconstructed epidermis model (EPISKIN^{TM}) to the result of the skin irritation test with EPISKIN^{TM}

Koji Kurihara[1], Shoichi Yahagi[2], Yuri Okano[2], Hitoshi Masaki[2]
[1]Nikoderm Research Inc., [2]Cosmos Technical Center Co., Ltd.

P－37 A Modified Short-Time Exposure (mSTE) Test for Cosmetics: an Alternative to the Draize Eye Irritation Test

Yoshihiro Yamaguchi[1], Lu Qiu[2], Xiaolin Li[2], Junping Liu[2]
[1]Kobayashi Pharmaceutical Co., LTD. Central R&D Lab.,
[2] Shanghai Entry-Exit Inspection and Quarantine Bureau of the P.R.China

P－38 International validation study of the in vitro alkaline comet assay

M. Honma[1], K. Yamakage[2], B. Burlinson[3], P. Escobar[4], K. Pant[5],
A. Kraynak[6], M. Hayashi[7], M. Nakajima[7], M. Suzuki[7],
R. Corvi[8], Y. Uno[9], L. Schechtman[10], R. Tice[11], H. Kojima[1]
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P－39 Whole embryo culture with minivial on rat embryo of day 9.5

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P－40 *In vitro* phototoxicity assessment of tattoo pigments using 3T3 fibroblast and reconstructed human skin model

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P－41 Integration of Micronucleus Assay into General Toxicity Testing for 3Rs

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P－42 Reduced numbers of fish used in acute toxicity testing

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P－43 Real-time evaluation of hemocompatible materials by substandard human blood for transplantation by blood bank

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