The 27th Annual Meeting of The Japanese Society for Alternatives to Animal Experiments

“Departure from past practice and kickoff towards to the future”

Chairman of 27th Conference:

Hiroshi Itagaki

December 5(Fri) to 7(Sun), 2014

Yokohama National University (Kanagawa)

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Pr ogram Overview

1st day December 5th (Friday)

	The large assembly hall of the Education and Culture Hall	The middle assembly hall of the Education and Culture Hall
8:00		
9:00		
10:00		Council Meeting
11:00	Reception desk start*	
12:00		Cloak room
13:00	Opening ceremony 【Chairman's lecture】 Hiroshi Itagaki, Ph.D.	
14:00	【Education lecture】 Risk assessment and hazard assessment Akihiko Hirose, Ph.D.	
15:00	【Special lecture 1】 How should we fabricate 3D tissue models? Makoto Nakamura, Ph.D.	
16:00	Symposium 1 【Symposium of Japan Cosmetic Industry Association】 Application of alternative to animal testing for apptoval of Quasi-drugs	
17:00		
18:00		
19:00		

2nd day December 6th (Saturday)

	Lecture Hall A-107	Lecture Hall C-201	Lecture Hall C-301	The large assembly hall of the Education and Culture Hall
8:00				Reception desk start*
9:00	Flash oral presentation-1	Flash oral presentation-2	Flash oral presentation-3	Poster session
10:00	Symposium 2 For the "guarantee of safety" of chemical substances.	Symposium 3 On-going and future challenge to the limits for the altenative techinique to animal experiments	Symposium 4 Current and future aspect of 3Rs in animal experiments	Exhibits
11:00				
12:00	Flash oral presentation-4	Flash oral presentation-5	Flash oral presentation-6	
13:00	Briefing session of Mandom International Research Grants on Alternative to Animal Experiments.			
14:00	【Special lecture 2】 Proposals for alternative test researchers from a dermatologist Kayoko Matsunaga, M.D, Ph.D.			
15:00	Symposium 5 【Symposium of SHISEIDO】 Development and practice of alternatives in Shiseido	Symposium 6 Understanding the toxicity mechanism at the genetic level	Symposium 7 Cell culture microdevices and its application to drug discovery	
16:00				
17:00				
18:00				
19:00	Social gathering （Yokohama red brick warehouse）			

＊reception desk: the entrance of the Education and Culture Hall

3rd day December 7th (Sunday)

University Hall 4th floor	The middle assembly hall of the Education and Culture Hall		Lecture Hall A-107	Lecture Hall C-201	Lecture Hall C-301	The large assembly hall of the Education and Culture Hall	University Hall 4th floor	The middle assembly hall of the Education and Culture Hall
		8:00				Reception desk start*		
		45						
		9:00				Poster presentation	Poster presentation	
		40						
		45						
		10:00				Poster presentation	Poster presentation	
		40						
		11:00	【 Special lecture 3 】 Prediction of drug disposition in the body: Use of modeling and simulation in "Alternative to animal experiments research" Yuich Sugiyamai, Ph.D.					
		12:00						
		10	General Meeting					
		13:00						
		10						
		20	Symposium 8 Considering bioethics and research ethics	Symposium 9 A new paradigm of drug development using human iPS cells	Symposium 10 Is "in silico" applicable for safety assurance of chemical substances?	Poster session	Poster session	
		14:00						
		15:00						
		20						
		30						
		16:00	Challenge contes			Poster removal	Poster removal	
		17:00	Closing ceremony					
		10						
		20						
		30						
		18:00						
		19:00						

Poster session (University Hall 4th floor)
Exhibits (University Hall 4th floor)
Cloak room (The middle assembly hall of the Education and Culture Hall)
Exhibits (The large assembly hall of the Education and Culture Hall)
Exhibits (University Hall 4th floor)
Cloak room (The middle assembly hall of the Education and Culture Hall)

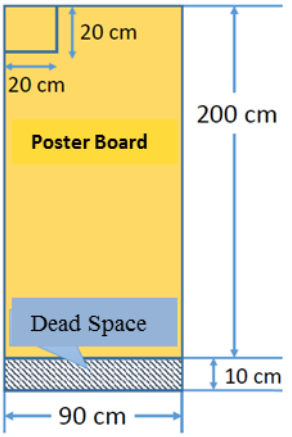
＊reception desk: the entrance of the Education and Culture Hall

Poster presentations

All posters will be presented in the University Hall and the Education and Culture Hall throughout two days from Saturday, 6 December to Sunday, 7 December. Poster viewing is scheduled on Sunday, 7 December. Authors introduce own posters by flash presentation, short time oral presentation, on Saturday 6 December.

Poster Dimensions

The poster boards will be 200 cm in height and 90 cm in width. However, please do not use 10 cm from the bottom, because it is hard to see. Refer to the right diagram (The diagram on the right can be viewed on the conference web site).



Generally, please write the title, names and affiliations within 20 cm from the top.
The poster number will be affixed to a space 20 cm × 20 cm in the top left.
The width that may be used for the title is 70 cm. The poster number will be prepared by the conference office beforehand.

Poster Display

All posters will be presented in the University Hall and the Education and Culture Hall throughout two days from Saturday, 6 December to Sunday, 7 December.

Location of posters:

The Education and Culture Hall	: P-01 ~ P-45
University Hall 4F	: P-46 ~ P-89

Poster set-up time : Saturday, 6 December, 8:45 – 11:00
Poster dismantling time : Sunday, 7 December, 15:20 – 17:20

※Each poster was assigned a number upon submission of the abstract and should be mounted on the board marked with the same number.

※Drawing pins for the posters and ribbons for the presenters will be prepared on the poster board.

※Depending upon the circumstances, if the dismantle time has passed, the poster will be removal by stuffs. Additionally, they will dispose of posters that are not taken after 18:00.

Presentations that excel will be awarded with a poster prize. After selection by the judges, notification of the winners as well as an awards ceremony will be performed during the closing ceremony on the Sunday, 7 December.

Poster viewing

Poster viewing : Sunday, 7 December, 8:45 - 10:40

Your presentation will be made in front of your poster according to the order determined by the chairperson. You should aim to present the poster in 5 minutes, with 3 minutes for questions.

Poster viewing will be conducted according below;

The Education and Culture Hall	8:45-9:40	: P-01-07, P-16-22, and P-31-37
	9:45-10:40	: P-08-15, P-23-30, and P-38-45
University Hall 4F	8:45-9:40	: P-46-52, P-60-67, and P-75-80
	9:45-10:40	: P-53-59, P-68-74, and P-81-89

Flash presentations

Flash presentations: Saturday, 6th December, 9:15-10:10 and 12:30-13:40

For all the poster presentations, a short time (about 3 minutes) oral presentation summarising the poster will be given prior to the poster presentations.

Flash presentation will be conducted according below;

1. Faculty of Engineering Science, Lecture room A-107, 9:15-10:10: P-01-15
2. Faculty of Engineering Science, Lecture room C-201, 9:15-10:10: P-16-30
3. Faculty of Engineering Science, Lecture room C-301, 9:15-10:10: P-31-45
4. Faculty of Engineering Science, Lecture room A-107, 12:30-13:40: P-46-59
5. Faculty of Engineering Science, Lecture room C-201, 12:30-13:40: P-60-74
6. Faculty of Engineering Science, Lecture room C-301, 12:30-13:40: P-75-89

For flash presentations around noon, lunchbox meals will be provided. We plan to prepare a sufficient number; however, we ask for your understanding in the unlikely case that there are not enough.

We ask that the speakers produce no more than 3 slides (including the title slide) summarising their posters, **which must be submitted to jsaae-27flash@ynu.ac.jp by the 24 November (Monday).** Furthermore, please provide the slides **as a PDF file**.

In previous conferences, we asked for the flash presentation slides as PowerPoint files; however, to reduce problems such as incorrect character encoding, we ask that PDF files be submitted for this conference.

Please ensure that you display the poster number and poster title on the title page. Furthermore, please name the file 'P-#-Presenter_name', where '#' is the poster number.

Please ensure you send the file to **jsaae-27flash@ynu.ac.jp** by 24th November (Monday). **We cannot accept files** for flash presentations on the day of the conference, or those that are late.

Please note: We do not support the following for flash presentations:

Presentations using a PC brought to the conference
Playback of video files
Use of animations

Things to note on the presentation day – please consider the following during your flash presentation:

If the speaker is not at the place of presentation at the correct time, we will proceed to the next speaker.
The flash presentations are 3 minutes long. If the 3 minutes are exceeded, a bell will sound. If the bell sounds, please try to end the presentation.

To allow for the rapid switchover of speakers, we ask that the next speaker wait at the side of the stage.
Because the aim of the presentation is to promote an interest in the poster within 3 minutes, we ask that speakers aid in keeping the conference in progress by presenting in a clear and concise manner.

Outline of the special lectures, educational lectures, and symposium lectures

[Speaking academics]

Windows 7 (and some Windows 8) PCs with PowerPoint 2010 (and some with PowerPoint 2013) have been prepared.
We cannot deal with compilation or any kind of audio output.

Receipt of projector data on the day

（1） Receipt of presentation data files and notebook PCs will be performed by an imaging/PC operator at the location of each presentation, so please bring these items at least 30 minutes before the start of the lecture or symposium.

(2) We ask that presentation data be provided on USB flash memory or CD-R media. Please make sure you run a virus check on the media beforehand. We will take custody of the data after confirming that the presentation data works. Also, please set the file name to 'Session_Name#Speaker_Name', where '#' is the session number.
Example: Special_lecture_****, Symposium#_**** (where '*' are half-width or full-width characters).

(3) Please convert data from non-Windows OS presentation software – for example, PowerPoint for Mac OS – into Windows PowerPoint-compatible files.
Due to such conversions, it might not be possible to reproduce the layout and style of the presentation; therefore, please check this beforehand and bring the presentation saved as a PDF file.

(4) While the presentation data will be momentarily saved onto the PCs at the conference, the office staff will be responsible for the disposal of any data held after the end of the conference.

Notes regarding bringing notebook PCs

(1) Please prepare an adapter for the PC.
(2) The output cable connectors provided at the conference are usually standard Mini D-sub15 type, such as is equipped in most PCs. For some Mac PCs, a conversion connector may be necessary. Please bring this yourself.
(3) Please turn off screensavers and power-saving settings. Additionally, because it is sometimes difficult to display the PC screen when a second screen is set up, please confirm the settings beforehand.
Also, please be aware that those responsible for 'chairman/speaker reception' will not be able to deal with changing these settings.
(4) Please ensure you prepare for mishaps by bringing backup data on a USB drive or CD-R.
(5) Even if videos have identical file names, differences in directory organization and the encoding files often cause them not to play back as desired on the conference PCs. Please be very cautious with the use of video files.

Please arrive 10 minutes before your lecture and wait in the seat reserved for the next speaker.

Please check for yourself how well the image is projected. A laser pointer will be provided at the podium; however, if you want a laser pointer with special features, please bring one.

After the special lectures are finished, there will be a ceremony for the presentation of a letter of thanks.

Please abide strictly to the lecture times. In the case of excessive run-over that does not stop after a time decided by the chairman, the lecture may be forced to end. We ask for your cooperation in this matter.

[Chairing academics]

Please be in the chairman's seat 10 minutes before each lecture.

The conference's progress is entrusted to the chairman. Please strictly observe the end times.
Lecture times differ by session; however, as a rule, please ring the bell once 3 minutes before the lecture, twice when the lecture is finished, and 3 times when the time for questions is over.

Some preparation is necessary for the speakers to take the stage at the end, so please consult with them the day before.

Program

PL　The conference chairman's lecture

13:00-14:00 5th December (Friday)

Chairman: Hidenobu Okumura (Noevir Holdings Co., Ltd.)

Towards social recognition of the Alternatives to Animal Experiments

○HIROSHI ITAGAKI[1]

1)Faculty of Engineering, Yokohama National University

SL-1　The conference special lecture 1

15:00-16:00 5th December (Friday)

Chairman: Shigenobu Hagino (Shiseido Reserch Center)

How should we fabricate 3D tissue models?

○MAKOTO NAKAMURA[1]

1)Graduateschool of Science and Engineering

SL-2　The conference special lecture 2

15:20-16:20 6th December (Saturday)

Chairman: Takashi Omori (Doshisha University)

Proposals for alternative test researchers from a dermatologist

○KAYOKO MATSUNAGA [1]

1)Department of Dermatology, Fujita Health University School of Medicine

SL-3　The conference special lecture 3

11:00-12:00 7th December (Sunday)

Chairman: Kouko Tanigawa (KOSE Corporation)

Prediction of drug disposition in the body: Use of modeling and simulation in "Alternative to animal experiments research"

○YUICHI SUGIYAMA [1]

1)Sugiyama Laboratory, RIKEN Innovation Center, RIKEN

EL　The conference educational lecture

14:00-15:00 5th December (Friday)

Chairman: Takashi Sozu (Kyoto University Graduate School)

Risk assessment and hazard assessment

○AKIHIKO HIROSE[1]

1)Division of Risk Assessment, National Institute of Health Sciences, Tokyo, Japan

Symposium1 【 Japan Cosmetic Industry Association 】
Application of alternative to animal testing for apptoval of Quasi-drugs
- Introduction of review meeting for alternative testing -
16:00-18:00 5th December (Friday)

Chairman: Hajime Kojima （National Institute of Health Sciences）
Mariko Sugiyama （SHISEIDO Research Center）

S1-1 Application of alternative to animal testing for apptoval of Quasi-drugs
- Introduction of review meeting for alternative testing -
○HAJIME KOJIMA[1]
1)National Institute of Health Sciences, Tokyo, Japan

S1-2 The point of the guidance for *in vitro* 3T3 NRU phototoxicity test
○NORIYASU IMAI[1,2], MARIKO SUGIYAMA[3], YUKO OKAMOTO
1)Japan Cosmetic Industry Association (JCIA) 2)KOSÉ Corporation 3)Shiseido Research Center

S1-3 The point of the guidance for three kinds of Local Lymph Node Assays
○Morihiko Hirota[1,2], Akemi Toyoda[1,3], Jun Sato[1,4], Yutaka Yamamoto[1,5], Masaaki Miyazawa[1,6]
1)Japan Cosmetic Industry Association (JCIA) 2)Shiseido Research Center 3)POLA CHEMICAL INDUSTRIES, INC 4)LION CORPORATION 5)Noevir Co., Ltd. 6)Kao Corporation

S1-4 The point of the guidance for Bovine Corneal Opacity and Permeability Test
○Hirokazu Seto[1,2], Yuichiro Goto[1,3], Sanae Takeuchi[1,2], Shigenobu Hagino[1,4], Aya Watanabe[1,5]
1)Japan Cosmetic Industry Association 2)P&G 3)KOSE 4)Shiseido 5)Kanebo

S1-5 The Guidance of Alternative Methods for Safety Assessment of Quasi-drug Products
○HIROSHI ONODERA[1]
1)Phaemaceuticals and Medical Devices Agency

S1-6 Recent Trends in Development for the Alternatives to Animal Testing in Korea
○Young-Jin Chun
College of Pharmacy, Chung-Ang University, Seoul, Korea

Symposium2
For the "guarantee of safety" of chemical substances. -Efforts for safety and security by chemical industries. –
10:20-12:20 6th December (Saturday)

Chairman: Fumiaki Shono（Japan Chemical Industry Association）
Kunihiko Yamashita（Daicel corporation）

S2-1 *Drosophila* as a disease model: For the elucidation of the sick building syndrome

○KAEKO KAMEI[1], Masamitsu Yamaguchi[2], Yoshihiro Inoue[3]
1)Dept. of Biomolecular Engineering, Kyoto Institute of Technology, Kyoto, Japan 2)Dept. of Applied Biology, Kyoto Institute of Technology, Kyoto, Japan 3)Insect Biomedical Research Center, Kyoto Institute of Technology, Kyoto, Japan

S2-2 Development of novel method to evaluate chemical compounds as the possible inducer of cancer stem cells using mouse iPS cells
○MASAHARU SENO[1]
1)Graduate School of Natural Science and Technology, Department of Biotechnology, Okayama University, Okayama, Japan

S2-3 Sophisticated hazard prediction by active QSAR modeling
○YOSHIMASA TAKAHASHI[1], TOMOYA YAMAZAKI[1], MIKA OOYAMA[1], YUJI IKEGAMI[1]
1)Department of Computer Science and Engineering, Toyohashi University of Technology, Aichi, Japan

S2-4 Applied research of a novel in vitro method for developmental toxicity to facilitate the industrial utilization
-Overview of development and validation study of Hand1-Luc Embryonic Stem Cell Test (Hand1-Luc EST)-
○KOHJI YAMAKAGE [1], Noriyuki Suzuki[2], Koichi Saito[2], Mika Waranabe[1], Naohiro Ikeda[3], Kazunori Yanagi[4], Takashi Omori[5], Hajime Kojima[6], Noriho Tanaka[1]
1)Hatano Research Institute, Food and Drug Safety Center, Kanagawa, Japan 2)Environmental Health Science Laboratory, Sumitomo Chemical Co. Ltd. 3)Safety Science Research Laboratories, Kao Corp. 4)Pharmaceutical Business Division, Sumika Chemical Analysis Service 5)Faculty of Culture and Information Science, Doshisha University, Kyoto, Japan 6)National Institute of Health Science (JaCVAM)

Symposium3
On-going and future challenge to the limits for the altenative techinique to animal experiments
10:20-12:20 6th December (Saturday)

Chairman: Hirokazu Seto（Procter & Gamble Japan K.K.）
Keiji Nishizumi（POLA Chemical Industries, Inc.）

S3-1 In vitro tests for photosafety assessment: present situation and correspondence for the problem solution
○YUMIKO IWASE[1]
1)Safety Research Laboratories, Research Division, Mitsubishi Tanabe Pharma Corporation

S3-2 Skin sensitization assessment of various cosmetic ingredients towards ultimate replacement of animal testing
○MASAAKI MIYAZAWA[1]
1)Kao Corporation

S3-3 Possibility of effect and safety evaluations of chemical compounds with skin permeation experiment using alternative membranes
○HIROAKI TODO[1]

1)Faculty pf Pharmaceutical Sciences, Josai University, Saitama, Japan

S3-4 Development of human epidermis skin equivalent prototype for *in vitro* skin corrosion and irritation testing

Cheng-Yi Wu[1]、○Huey-Min Lai[1]、Meng-Hsueh Lin[1]、Hui-Chun Hsu[1]、Tsung-Han Lee[1]、Chih-Ching Liao[1]、Wann-Hsin Chen[1]、Hui-Ting Huang[1]、Yen-Chun Chen[1]、Junichi Hayakawa[2]

1)Biomedical Technology and Device Research Laboratories, Industrial Technology Research Institute (ITRI)、2)Saticine Medical Co., Ltd.

S3-5 The issue and future for Alternative Primary Skin Irritation Test

○MARIKO SUGIYAMA[1]

1)Shiseido Research Center

S3-6 Animal Alternative Test Researches in SCDC

○Ping Xiao[1]

1) Laboratory of Toxicology, Shanghai Municipal Center for Disease Control and Prevention

Symposium4

Current and future aspect of 3Rs in animal experiments

10:20-12:20 6th December (Saturday)

chairman: Satoshi Kunita（Center for Experimental Medicine, Jichi Medical University）
Takuya Ikeda（Charles River Laboratories Japan）

S4-1 3Rs have been materialized by a certain gene modified mouse model developed under strategic plan

○HIDEKI TSUTSUMI[1]

1)Central Institute for Experimental Animals, Kawasaki, Japan

S4-2 NIR non-invasive fluorescence Imaging

○YOSHIHIRO MIWA[1,2], JUNKO TANAKA[1], SHOTA SAKAGUCHI[3], TAKANOBU KUROYAMA[3], TOMOKI SAKASAI[3], KOSUKE KAWAMURA[3]

1)Faculty of Medicine, University of Tsukuba, Tsukuba, Japan 2)Laboratory Animal Resource Center, University of Tsukuba, Tsukuba, Japan 3)Graduate School of Comprehensive Human Science, University of Tsukuba, Tsukuba, Japan

S4-3 Application possibility of micro-computed tomography imaging to the 3Rs: Reduction, Replacement and Refinement of animal experiments

○MASARU TAMURA[1]

1)Technology and Development Team for Mouse Phenotype Analysis, RIKEN Bio-Resource Center, Tsukuba, Ibaraki, Japan

S4-4 Activities of the Japan Pharmaceutical Manufacturers Association for the 3Rs in laboratory animal studies

○HIDENORI WATANABE[1,2]

1)JAPAN TOBACCO INC. Central Pharmaceutical Institute, Osaka, Japan 2)Japan Pharmaceutical Manufacturers Association (JPMA)

Symposium5 【Shiseido Symposium】

Development and practice of alternatives in Shiseido

16:30-18:30 6th December (Saturday)

Chairman: Hirokazu Kouzuki（Shiseido Quality Assessment Center）
Takao Ashikaga（Shiseido Quality Assessment Center）

S5-1 A seminar on alternatives development in Shiseido with external experts

○TAKAO ASHIKAGA[1]

1)Shiseido Reseach Center

S5-2 Application of in vitro model for non-animal safety assessment

○MORIHIKO HIROTA[1]

1)Shiseido Research Center

S5-3 In silico methodology for cosmetic safety assessment

○HIROKAZU KOUZUKI[1]

1)Shiseido Research Center, Shiseido Co., Ltd, Yokohama, Japan

S5-4 Bayesian Integrated Testing Strategy for Skin Sensitization Potency - an update

○JOANNA JAWORSKA[1]

1)Procter & Gamble

S5-5 Reactive oxygen species (ROS) assay for non-animal photosafety assessmentof cosmetics

○SATOMI ONOUE[1]

1)Department of Pharmacokinetics and Pharmacodynamics, School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, Japan

Symposium6

Understanding the toxicity mechanism at the genetic level

16:30-18:30 6th December (Saturday)

Chairman: Tsuyoshi Yokoi (Nagoya University Graduate School of Medicine)
Kosei Ito (Graduate School of Pharmaceutical Sciences, Chiba University)

S6-1 Study on usefulness of hepatotoxicity assay using HepaRG cells
○TAKAFUMI TOMIDA[1], YOSHIHIRO KONNO[1]
1)Pharmacokinetics and Safety Department, Drug Research Center, Kaken Pharmaceutical Co., LTD., Kyoto, Japan

S6-2 Involvement of mitochondria to determine the sensitivity of drug-induced liver injury
○SHUICHI SEKINE[1], TOSHIHARU HORIE[2], KOUSEI ITO[1]
1)Graduate school of Pharmaceutical Sciences, Chiba University, Chiba, Japan 2)Teikyo Heisei University

S6-3 Investigations for biomarkers of idiosyncratic drug-induced liver injury
○TSUYOSHI YOKOI[1]
1)Department of Drug Safety Sciences, Nagoya University Graduate School of Medicine

S6-4 The toxicological application of large-scale database of microRNA
○KEIICHI MINAMI[1]
1)Exploratory Research Laboratories, Tsukuba Research Institute, Ono Pharmaceutical Co., Ltd., Tsukuba, Japan

S6-5 Current situation of the toxicity prediction by large-scale gene expression database
○NORIYUKI NAKATSU[1]
1)Toxicogenomics Informatics Project, National Institute of Biomedical Innovation, Osaka, Japan

Symposium7

Cell culture microdevices and its application to drug discovery

16:30-18:30 6th December (Saturday)

Chairman: Junji Fukuda (Yokohama National University)
Noriyasu Imai (KOSE Corporation)

S7-1 Development of Cell-Base Assay Technology for Drug Discovery
○TOSHIYUKI KANAMORI[1]
1)Drug Assay Device Team, Research Center for Stem Cell Engineering, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan

S7-2 Development and application of an oxygen permeable device for 3D cell culture
○TAKAHISA ANADA[1], JUNJI FUKUDA[2], OSAMU SUZUKI[1]
1)Division of Craniofacial Function Engineering, Graduate School of Dentistry, Tohoku University, Sendai, Japan

2) Faculty of Engineering, Yokohama National University

S7-3 Introduction and application of novel culture systems for cryopreserved human hepatocytes to DMPK studies in drug discovery

○YASUHIRO YAMADA[1]

1)DMPK Research Laboratories, Research Division, Mitsubishi Tanabe Pharma Corporation, 2-50 Kawagishi, 2-Chome, Toda, Saitama, Japan

S7-4 Establishment of a primary human hepatocyte culture system for functional maintenance of drug metabolizing enzymes with gas-permeable lumox&reg plates and its application to metabolite-induced hepatotoxicity assays

○KAZUNOBU AOYAMA[1], Akihiko Sumita[2], Naomi Kamiguchi[3], Teruaki Okuda[3], Hideki Hirabayashi[1], Toshiya Moriwaki[1], Junzo Takahashi[1]

1)Drug Metabolism and Pharmacokinetics Research Laboratories, Pharmaceutical Research Division, Takeda Pharmaceutical Company Limited, Kanagawa, Japan 2)Analytical Development Laboratories, Chemistry, Manufacturing and Controls Center, Takeda Pharmaceutical Company Limited, Osaka, Japan 3)Drug Safety Research Laboratories, Pharmaceutical Research Division, Takeda Pharmaceutical Company Limited, Kanagawa, Japan

Symposium8

Considering bioethics and research ethics

- Messages from the Japanese Society for Alternatives to Animal Experiments -

13:20-15:20 7th December (Sunday)

Chairman: Shinichi Ogata（Yokohama National University）
Masaharu Akita（Kamakura Women's University）

S8-1 Importance of the school education (from childhood to university) in the development of a bioethics view and a research ethics view

○SHIMOJO HAJIME[1]

1)Graduate School of Education, Yokohama National University

S8-2 Ethical aspects of data handling

○ISAO YOSHIMURA[1]

1)Tokyo University of Science, tokyo, Japan

S8-3 Changing Social Ethics Toward Animals: What Is A Sensible Approach?

○HIROMI KAMEKURA[1]

1)Japan Anti-Vivisection Association, Tokyo, Japan

S8-4 Attitude of research ethics and bioethics as a toxicological scientist

○TAKEMI YOSHIDA[1,2]

1) School of Pharmacy, Showa University, Professor Emeritus, Tokyo, Japan

2) Council on Pharmacists Credentials, Tokyo, Japan

S8-5 As a statesperson who hopes that alternatives to animal testing will be promoted
○NAOMI TOKASHIKI[1]
1)Member of the House of Representatives, deputy secretary-general of the Liberal Democratic Party

Symposium9
A new paradigm of drug development using human iPS cells
13:20-15:20 7th December (Sunday)

chairman： Yasunari Kanda（Division of Pharmacology, National Institute of Health Sciences）
Ikuo Horii（Pfizer Japan Inc.）

S9-1 Development of new testing methods for safety pharmacology using human iPS cells
○YASUNARI KANDA[1]
1)Division of Pharmacology, National Institute of Health Sciences, Tokyo, Japan

S9-2 Regeneration of antigen specific T cells using the iPSC technology: -A novel strategy for cancer immunotherapy-
○HIROSHI KAWAMOTO[1]
1)Department of Immunology, Institute for Frontier Medical Sciences, Kyoto University, Kyoto, Japan

S9-3 Study for iPS cells derived from intractable diseases
○TAKUMI ERA[1]
1)Department of Cell Modulation, Institute of Molecular Embryology and Genetics, Kumamoto University, Kumamoto, Japan

S9-4 A New Approach for 3D Tissue & Organ Fabrication Inspired From Orthopedic Surgery
○KOICHI NAKAYAMA[1]
1)Biomedical Engineering Course Advanced Technology Fusion Graduate School of Science and Engineering, Saga, Japan

Symposium10
Is "in silico" applicable for safety assurance of chemical substances?
13:20-15:20 7th December (Sunday)

Chairman： Kouichi Yoshinari（School of Pharmaceutical Sciences, University of Shizuoka）
Junko Ohuchi（Kao Corporation, R&D-Safety Science Research）

S10-1 The view of safety evaluation utilized in silico

○NAOHIRO IKEDA[1]

1)R&D - Core Technology - Safety Science Research, Kao Corporation, Tochigi, Japan

S10-2 Use of QSAR Tools for Hazard Identification and Control of Genotoxic Impurities in Pharmaceuticals

○MASAMITSU HONMA[1]

1)National Institute of Health Sciences, Tokyo, Japan

S10-3 The progress of the OECD QSAR and AOP projects

○TAKASHI YAMADA[1], YUKI SAKURATANI[1,2]

1)Chemical Management Center, National Institute of Technology and Evaluation, Tokyo, Japan 2)OECD, Paris, France

S10-4 In vitro and in silico study for the evaluation of liver toxicity by chemical substances with liver hypertrophy as an example

○KOUICHI YOSHINARI[1]

1)Department of Molecular Toxicology, School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, Japan

International Research Promotion Session of Alternative Animal Experiments by Mandom Corp.
13:50-15:10 6th December (Saturday)

Chairman : Takashi Omori(Doshisha University)

M-1 Development of in vitro system for searching the circadian clock-regulatory factors responsible for malignant cell transformation
○SATORU KOYANAGI[1]
1)Department of Pharmaceutics, Faculty of Pharmaceutical Sciences, Kyushu University

M-2 A plan for development of universal method in skin stimulus measurement using epidermal keratinocyte mitochondria as a forefront of sensory system for homeostasis maintenance
○TOSHIHIRO ONA[1,2], JUNKO SHIBATA[1,2]
1)Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University, Fukuoka, Japan 2)OK Lab.Inc., Cell BET division

M-3 Prediction of the risk of drug-induced cholestasis based on the functional evaluation of bile canalicular transporters in vitro
○TAKASHI YOSHIKADO[1], Yuichi Sugiyama[1]
1)Sugiyama Laboratory, RIKEN Innovation Center, RIKEN, Yokohama, Japan

Poster Session

Flash oral presentation 9:15-10:10, 12:30-13:40 6th December (Saturday)

Poster session 8:45-10:40 7th December (Sunday)

Chairman: Mariko Sugiyama （SHISEIDO Research Center）
Noriyasu Imai（KOSE Corporation）
Shinichi Ogata（Yokohama National University）
Takuro Ueki(Noevir Co., Ltd.)
Keiji Nishizumi（POLA Chemical Industries, Inc.）
Junko Ohuchi（Kao Corporation, R&D-Safety Science Research）
Takao Ashikaga（Shiseido Quality Assessment Center）
Kunihiko Yamashita（Daicel corporation）
Tsuyoshi Yokoi（Nagoya University Graduate School of Medicine）
Hidenobu Okumura(Noevir Holdings Co., Ltd.)
Masaharu Akita（Kamakura Women's University）
Junji Fukuda（Yokohama National University）

P-01 Study of *in vitro* skin irritation test targeted for sensitive skin (Part 4)
○HIDEFUMI IKEDA[1], HIDEKI NISHIURA[1]
1)R&D Basic Research, Nihon Kolmar Co., Ltd.

P-02 Special Committee's Report -Alternative Primary Irritation Test
○SUGIYAMA MARIKO[1], NORIYASU IMAI[1], TAKASHI OMORI[1], SHIGENOBU HAGINO[1], HIROAKI TODO[1], AKEMI TOYODA[1], KENJI SUGIBAYASHI[1]
1)Special committee on alternative primary irritation test, Japanese Society of Alternatives to Animal Experiments (JSAAE), Tokyo, Japan

P-03 Development of new in vitro skin irritation test methods by using human epidermis models, EpiSkin™ and SkinEthic RHE™, to predict the 24 hours patch test.
○MIYUKI FUJISHIRO[1], Daiki Kyotani[2], Koji Kurihara[2], Daisuke Yoshida[1], Setsuko Jitsukawa[3], Nathalie Alepee[4], José Cotovio[4]
1)Cosmos Technical Center Co., Ltd., Tokyo, Japan 2)Nikoderm Research Inc., Osaka, Japan 3)NIHON L'ORÉAL K.K., Kanagawa, Japan 4)L'ORÉAL Research&Innovation, Paris, France

P-04 Differentiation of Muse cells into melanocytes and its application to 3D skin model
○XINTIAN LAO[1], Kazuki Tatsumi[2,3], Mari Dezawa[3], Tadayoshi Ueda[1], Yoshihiro Sumita[1]
1)DS Pharma Biomedical Co.,Ltd. 2)Clio, Inc. Tokyo, Japan 3)Department of Stem Cell Biology andHistology, Tohoku University Graduate School of Medicine, Miyagi, Japan

P-05 Prediction of skin irritation /corrosion potential of chemical using the Reconstructed Human Epidermal model.
○RYOJI SAWADA[1], YUYA IKUTA[1], TAKASHI MORIMOTO[1], TAKAFUMI YAMAGUCHI[1], KUNIFUMI

INAWAKA[1], HASHIHIRO HIGUCHI[1], SATOSHI KAWAMURA[1]
1)Sumitomo chemical Co, Ltd., Environmental Health Science Laboratory, Osaka, Japan

P-06 Basal expression of inflammatory mediators in Keraskin-VM、 a reconstructed human epidermis developed in Korea
○Ji-Hoon Jo[1)], Jung-Eun Park[1)], Soo-Hyun Lee[2)], Yong Heo[1)]
1)Catholic University of Daegu, Dept. Occupational Health 2)Modern Cell & Tissue Technologies, Co., Republic of Korea

P-07 Study on eye irritation test method using the three-dimensional reconstructed corneal model created using immortalized human corneal epithelial cell line (iHCE-NY)
-Development of discriminant method based on the image analysis-
○YOSHINAO KATO[1], NAOKI YAMAMOTO[2], TOSHIO IGARASHI[1], ATSUSHI SATO[1], SATORU NAKATA[1], HAJIME KOJIMA[3]
1)Research Institutes, Nippon Menard Cosmetic Co., Ltd., Aichi, Japan 2)Fujita Health University Joint Research Laboratory, Aichi, Japan 3)National Institute of Health Sciences, Tokyo, Japan

P-08 Construction of three-dimensional culture model by using SIRC cells and study on the eye irritation test method using the model
○TOMOMI MAEDA[1], YOSHINAO KATO[1], ATSUSHI SATO[1], SHUNJI YAMADA[1], SATORU NAKATA[1]
1)Research Institutes, Nippon Menard Cosmetic Co., Ltd., Aichi, Japan

P-09 Advantages of the predictive capacity utilizing a Vitrigel-EIT (eye irritancy test) method
○HIROYUKI YAMAGUCHI[1,3], HAJIME KOJIMA[2], TOSHIAKI TAKEZAWA[1]
1)National Institute of Agrobiological Sciences, Tsukuba, Japan 2)National Institute of Health Sciences, Tokyo, Japan 3)Kanto Chemical Co., Inc., Tokyo, Japan

P-10 Comparing measurement methods of cell-viability in LabCyte CORNEA-MODEL24
○MAI ENDO[1], MASAKAZU KATOH[2], TAKASHI OMORI[1], AIMI YAMASHITA[3], HAJIME KOJIMA[4], TOSHIHIKO KASAHARA[5], HARUNA TAHARA[5], SHINSUKE SHINODA[6], SAORI HAGIWARA[6], HIDEFUMI IKEDA[7], YUICHIRO YOSHITAKE[8]
1)Graduate School of Culture and Information Science, Doshisha University, Kyoto, Japan 2)Japan Tissue Engineering Co., Ltd., Aichi, Japan 3)Faculty of Culture and Information Science, Doshisha University, Kyoto, Japan 4)National Institute of Health Sciences, Tokyo, Japan 5)FujiFilm Co., Kanagawa, Japan 6)Drug Safety Testing Center Co., Ltd.,Saitama, Japan 7)Nihon Kolmar Co., Ltd., Osaka, Japan 8)Oppen Cosmetics Co., Shiga, Japan

P-11 Transition of the historical control data of the Bovine Corneal Opacity and Permeability (BCOP) test method and analysis of IVIS data of ocular irritants
Takashi Sakakibara[1], Kouta Itoh[1], Takuo Nakayama[1], Miharu Koshita[1], Souhei Okumura[1], ○Kohtaro Kawamura[1], Masao Matsuura[1]
1) Safety Research Division, Safety Research Institute for Chemical Compounds Co., Ltd,Sapporo, Japan.

P-12 Validation study of Vitrige-EIT (Eye Irritancy Test) method (2)
○Mika Watanabe[1], Nicole C. Kleinstreuer[2], Michael Schaeffer[3], Tae Sung Kim[4], Wannhsin Chen[5], Takashi Sozu[6],

Takeru Niitsuma[1], Yamashita Kunihiko[7], Hiroshi Miyazaki[7], Takayuki Fukuda[8], Noriko Yamaguchi[8], Sho Fujiwara[8], Hiroyuki Yamaguchi[9,10], Toshiaki Takezawa[10], Hajime Kojima[11]
1)Hatano Research Institute, Food and Drug Safety Center, Kanagawa, Japan 2)National Institute of Environmental Health Sciences, NICEATM 3)Institute of Health and Consumer Protection, EURL-ECVAM 4)National Institute of Food & Drug Safety Evaluation, KoCVAM 5)Industrial Technology Research Institute 6)Kyoto University, Kyoto, Japan 7)Daicel Corporation, Hyogo, Japan 8)BoZo Research Center Inc., Tokyo, Japan 9)Kanto Chemical Co., Inc., Tokyo, Japan 10)National Institute of Agrobiological Sciences, Tsukuba, Japan 11)National Institute of Health Sciences, Tokyo, Japan

P-13 Modeification of the 3T3 NRU photo-toxicity test conditions for the evaluation of poorly water-soluble substances (part 2)
○AKEMI TOYODA[1], Maki Sugiyama[1], Seiichiro Furihata[1], Keiji Nishizumi[1], Hiroshi Itagaki[2]
1)Quality Reseach Department, POLA Chemical Industries, INC, Yokohama, Japan
2)Yokohama National University

P-14 Improvement of the ROS assay for comprehensive photosafety assassment of various chemicals
○HIROTO OHTAKE[1], GEN SUZUKI[1], MASASHI KATO[1], MASANORI OCHI[1], YOSHIKI SETO[1], SATOMI ONOUE[1]
1)Department of Pharmacokinetics and Pharmacodynamics, School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, Japan

P-15 Development of phototoxicity assay using hESC-derived RPEs
○TAKASHI MORI[1], Tokushige Nakano[1], Noriyuki Suzuki[1], Koichi Saito[1]
1)Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd, Osaka, Japan

P-16 Cardiotoxicity of captopril in chick embryos
○YUJI YOSHIYAMA[1], TOSHIMI IIZUKA[1], TAKENORI TAMAKI[1], HIDETO ARIUMI[1]
1)Center for Clinical Pharmacy and Clinical Sciences, Kitasato University School of Pharmacy, Tokyo, Japan

P-17 Dual-color fluorescent imaging system for visualization of CYP3A4 and CYP3A7 expression changes in human hepatic carcinoma HepaRG cells
○SAORI TSUJI[1], FUMIHIKO KAWAMURA[2], MUSASHI KUBIURA[2], AYAKA HAYASHI[2], TETSUYA OHBAYASHI[3], YASUHIRO KAZUKI[2,4], MITSUO OSHIMURA[4], MASAKO TADA[4]
1)Bio Frontier Project Promotion Section, Organization for Tottori Industria lPromition, Yonago, Japan 2)Division of Molecular Genetics and Biofunction, Institute of Regenerative Medicine and Biofunction, Graduate School of Medical Science, Tottori University, Yonago, Japan 3)Division of Laboratory Animal Science, Research Center for Bioscience and Technology, Tottori University, Yonago, Japan 4)Chromosome Engineering Research Center, Tottori University, Yonago, Japan

P-18 In vitro developmental neurotoxicity testing based on energy metabolism of human multipotent cells
○MIKI ASANAGI[1,2], SHIGERU YAMADA[2], HIROSHI ITAGAKI[1], YUKO SEKINO[2],

YASUNARI KANDA[2]
1)Graduate School of Engineering, Yokohama National University, Kanagawa, Japan
2)Division of Pharmacology, National Institute of Health Sciences, Tokyo, Japan

P-19 Development of an endotoxin detection system using IL-8 reporter cell.
○YUTAKA KIMURA[1], CHIZU FUJIMURA[1], SETSUYA AIBA[1]
1)Department of Dermatology, Tohoku University Graduate School of Medicine

P-20 Rapid *in vivo*-like cell-based assay of epidermis pro-turnover efficacy with toxicity by homogenized Kiwi fruits
○TOSHIHIRO ONA[1,2], JUNKO SHIBATA[1,2], AKIO HAYAKAWA[3], SHINYA SAKAMOTO[4]
1) Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University, Fukuoka, Japan 2)OK Lab. Incorporation, Cell BET Division, Mitaka, Tokyo, Japan 3)Kohkan Pharmaceutical Institute Company Limited 4)Agri Company Limited

P-21 In vitro anti-thrombotic evaluation of biomaterials by using the ATP assay
○NAOAKI ISHINO[1,2], Toshia Fujisato[1]
1)Graduate School of Engineering, Osaka Institute of Technology, Osaka, Japan
2)Department of Medical Engineering, Aino university, Osaka, Japan

P-22 Study of alternative methods using silkworm for mammalian efficacy tests
○TAKUYA SUGITA[1], TAKURO UEKI[1], YUTAKA YAMAMOTO[1], HIDENOBU OKUMURA[1]
1)Noevir Co., Ltd, Shiga, Japan

P-23 Study of general versatility on the acute oral toxicity test using silkworm
○TAKURO UEKI[1], TAKUYA SUGITA[1], YUTAKA YAMAMOTO[1], HIDENOBU OKUMURA[1]
1)Noevir Co., Ltd., Groupwide Research and Development, Shiga, Japan

P-24 An efficient and reliable method for generation of Mesenchymal Progenitors from human gingiva-derived iPS cells
○YASUYUKI UMEZAKI[1], YOSHIYA HASHIMOTO[2], NAOKI NISHISHITA[3], SHIN KAWAMATA[3], SHUNSUKE BABA[1]
1)Department of Oral Implantology, Osaka Dental University, Osaka, Japan
2)Department of Biomaterials, Osaka Dental University, Hirakata, Japan 3)Research and Development Center for Cell Therapy, Foundation for Biomedical Research and Innovation, Kobe, Japan

P-25 Application to the agent screening for overcoming drug resistance by using 3D culture of human hepatoma cells
TAKU MATSUSHITA[1], ○Takahiro Mizutami[1], Yuya Ohta[1], Takaaki Ishii[1], Yuji Komizu[1]
1)Department of Applied Life Science, Sojo University, Kumamoto, Japan

P-26 Hepatotoxic drugs-induced metabolic-dependent mitochondrial toxicity
○MAHO SHIRAKAWA1, SHUICHI SEKINE2, AYAKA TAKANA1, TOSHIHARU HORIE3, KOUSEI ITO2
1)Department of Biopharmaceutics, Faculty of Pharmaceutical Sciences, Chiba University, Chiba, Japan 2)Department

of Biopharmaceutics, Graduate school of Pharmaceutical Sciences, Chiba University, Chiba, Japan 3)Faculty of Pharmacy, Teikyo-Heisei University

P-27 Optimization of cell-based assay for Assessment of Mitochondrial Dysfunction induced Hepatotoxicity
○CONG LIU[1], Shuichi Sekine[1], Kousei Ito[1]
1)Department of Biopharmaceutics, Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, Japan

P-28 Evaluation of lactic acid bacteria activating innate immunity using silkworm
○SATOSHI NISHIDA[1], KENNICHI ISHII[2], HIROSHI HAMAMOTO[2], KAZUHISA SEKIMIZU[1,2]
1)Genome Pharmaceuticals Institute Co.,Ltd, Tokyo, Japan 2)Laboratory of Microbiology, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan

P-29 Effects of the multi-walled carbon nanotubes (MWCNTs) to normal myocardial contraction rhythms on differentiation of ES-D3 cells in three-dimensional culture
○Koichi IMAI[1], Tsubasa SHIRAI[1], Fumio WATARI[2]
1)Department of Biomaterials, Osaka Dental University 2)Graduate School of Dental Medicine, Hokkaido University

P-30 Influence of the mouse ES cell culture with scaffold for the regenerative medicine using collagen derived from Tilapia scales
○Koichi IMAI[1], Tsubasa SHIRAI[1]
1)Department of Biomaterials, Osaka Dental University

P-31 under construction

P-32 Screening of suitable chemicals for in vitro hepatotoxicity test
○SHINOBU WAKURI[1], KIYOSHI SASAKI[1], MAIKO GONDO[1], NOBUKO ENDO[1], HAJIME SUI[1], KOHJI YAMAKAGE[1]
1)Division of Alternative Toxicology Test, Hatano Institute, Food and Drug Safety Center, Hadano, Japan

P-33 under construction

P-34 Comparison of 3 criteria incorporating variation of index for toxicity of the interleukin 8 luciferase Luc assay (IL-8 Luc assay)
○AOI MARUYA[1], AIBA SETSUYA[2], YUTAKA KIMURA[2], MIKA WATANABE[3], NORIYUKI SUZUKI[4], KOHJI YAMAKAGE[3], KOICHI SAITO[4], YOSHIHIRO NAKAJIMA[5], YOSHIHIRO OHMIYA[6], SHOJIRO YAMAZAKI[3], HAJIME KOJIMA[7], NORIHO TANAKA[3], HITOSHI SAKAGUCHI[8], HIROSHI ITAGAKI[9], MAYUMI KOBAYASHI[1], AZUSA MORI[1], TAKASHI OMORI[1]
1)Faculy of Culture and Information Science, Doshisya University, Kyoto, Japan 2)Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan 3)Hatano Research Institute, Food and Drug Safety Center, Hatano, Japan 4)Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd., Osaka, Japan 5)Health Research Institute, Advanced Industrial Science and Technology, Takamatsu, Japan 6)Biomedical Research Institute, Advanced Industrial Science and Technology, Tsukuba,

Japan 7)Japanese Center for the Validation of Alternative Methods, Tokyo, Japan 8)Kao
9)Yokohama National University

P-35 An inter-laboratory validation study and creation of a dataset of IL-8 Luc assay
○YUTAKA KIMURA[1], MIKA WATANABE[2], NORIYUKI SUZUKI[3], TOMOKO IWAKI[4], KOHJI YAMAKAGE[2], KOICHI SAITO[3], YOSHIHIRO NAKAJIMA[4], CHIZU FUJIMURA[1], YOSHIHIRO OHMIYA[5], AYAKO SAKAI[2], AOI MARUYA[6], TAKASHI OMORI[6], SHOJIRO YAMAZAKI[7], HAJIME KOJIMA[8,9], NORIHO TANAKA[7], SETSUYA AIBA[1]
1)Department of Dermatology, Tohoku University Graduate School of Medicine 2)Hatano Research Institute, Food and Drug Safety Center 3)Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd. 4)Health Research Institute, Advanced Industrial Science and technology 5)Biomedical Research Institute, Advanced Industrial Science and Technology 6)Faculty of Culture and Information Science, Doshisha University 7)Organization for Tottori Industrial Promotion 8)Japanese Center for the Validation of Alternative Methods(JaCVAM) 9)National Institute of Health Sciences

P-36 An easy method for estimation of the half-maximal inhibitory concentration using curve fitting appropriate to the concentration-response relationship
○AZUSA MORI[1], NORIYUKI SUZUKI[2], LE COZ FLORIAN[2], HIROHISA NAGAHORI[2], KOICHI SAITO[2], MAYUMI KOBAYASHI[1], AOI MARUYA[1], TAKASHI OMORI[1]
1)Faculty of Culture and Information Science, Doshisha University, Kyoto, Japan
2)Environmental Health Science Laboratory, Sumitomo Chemical Co., Ltd

P-37 Relationship between IC50 and ID50 value in the Hand1-Luc Embryonic Stem cell Test (Hand1-Luc EST)
○MAYUMI KOBAYASHI[1], NORIYUKI SUZUKI[2], LE COZ FLORIAN[2], HIROHISA NAGAHORI[2], KOICHI SAITO[2], AZUSA MORI[1], AOI MARUYA[1], TAKASHI OMORI[1]
1)Faculty of Culture and Information Science, Doshisha University, Kyoto, Japan
2)Emvironmental Health Science Laboratory, Sumitomo Chemical Co.,Ltd

P-38 Hazard Evaluation Support System Integrated Platform (HESS) - Evaluation of sensitivity to address renal toxicity -
○JUNKO OHUCHI[1], Naohiro Ikeda[1], Yuki Sakuratani[2], Takashi Yamada[2], Naohiro Nishiyama[1]
1)R&D - Core Technology - Safety Science Research, Kao Corporation, Tochigi, Japan
2)Chemical Management Center, National Institute of Technology and Evaluation (NITE),Tokyo, Japan

P-39 A proposal of a risk-warning method for reporting adverse events
-An application Baysian statistics-
○AIMI YAMASHITA[1], TAKASHI OMORI[1]
1)Faculty of Culture and Information Science, Doshisha University, Kyoto, Japan

P-40 Quantitative risk vs. risk trade-off analysis and a quantitative activity-activity relationship (QAAR) model
○JUN-ICHI TAKESHITA[1], MASASHI GAMO[1]
1)Research Institute of Science for Safety and Sustainability, National Institute of Advanced Industrial Science and Technology (AIST), Ibaraki, Japan

P-41 Skin sensitization model based on only animal data by qualitative structure-toxicity

relationships (QSTR) approach
○KAZUHIRO SATO[1], Kotaro Yuta[2], Yukinori Kusaka[1]
1)Department of Environmental Health, School of Medicine, University of Fukui 2)In Silico Data, Narashino, Chiba275-0025, Japan

P-42 Approach to the Reproduction/Developmental Toxicity Assessment for Cosmetic Ingredients Using *In silico* Method
HIROKAZU KOUZUKI[1], ○TOMOKA HISAKI[1], MAKI AIBA[1], MASAHIKO YAMAGUCHI[1], TAKAO ASHIKAGA[1]
1) SHISEIDO CO., LTD. Quality Assessment Center, Safety Research & Development Laboratories

P-43 Establishing an *in silico* prediction system of nine major *in vivo* drug clearance pathway using machine learning technique
○KOTA TOSHIMOTO[1], NAOMI WAKAYAMA[2], SHUN HOTTA[3], KAZUYA MAEDA[4], TAKASHI ISHIDA[3], YUTAKA AKIYAMA[3], YUICHI SUGIYAMA[1]
1)Sugiyama Laboratory, RIKEN Innovation Center, RIKEN, Yokohama, Japan 2)Drug Metabolism and Pharmacokinetics Research Section, Eisai Co., Ltd, Ibaraki, Japan Department of Computer Science, Graduate School of Information Science and Engineering, Tokyo Institute of Technology, Tokyo, Japan 4)Laboratory of Molecular Pharmacokinetics, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, Japan

P-44 Studies on the fusion of in silico toxicity prediction and alternatives to animal experiments: Development of two-class classification methods that specializes in toxicity prediction
○KOHTARO YUTA[1]
1)In silico data, Ltd., Chiba, Japan

P-45 Development of *in vitro* alveolar model using human cell lines and rat primary cells and the combination use of the numerical model for the assessment of nanoparticle toxicity
○KOKORO IWASAWA[1], Kodai Harano[1], Rie Ogasawara[2], Naohide Shinohara[3], Guihua Zhang[3], Masashi Gamo[3], Akira Suwabe[2], Yasuyuki Sakai[1]
1)Institute of Industrial Science, the University of Tokyo, Tokyo, Japan 2)School of Medicine, Iwate Medical University, Morioka, JAPAN 3)National Institute of Advanced Industrial Science and Technology, Tsukuba, JAPAN

P-46 A novel THP-1-based reporter cell line, ITRI-54M, for *in vitro* screening of skin sensitizers
Zong-Keng Kuo, Wen-Sheng Chiang, ○Huey-Min Lai and Hsiang-Wen Tseng
Center of Excellence for Drug Development, Biomedical Technology and Device Research Labs, Industrial Technology Research Institute

P-47 Study on reproducibility of SH test for predicting skin sensitization potency.
○MAKI SUGIYAMA[1], KAORU KASAHARA[1], AKEMI TOYODA[1], KEIJI NISHISUMI[1], MORIHIKO HIROTA[2], TAKAO ASHIKAGA[2], HIROKAZU KOUZUKI[2]
1)Quality Research Department, POLA CHEMICAL INDUSTRIES,INC. 2)Shiseido Research Center

P-48 Investigation of the Short Time Exposure to assess water-insoluble chemicals in vitro skin

sensitization test
○KAZUTO NARITA[1], Hajime Kojima[2], Hiroshi Itagaki[1]
1)Yokohama national university, Kanagawa, Japan 2)National institute of health sciences, Tokyo, Japan

P-49 Development of a novel in vitro skin sensitization assay with reconstructed human epidermis. ~Analysis of expression mechanism of marker genes and assessment of predictivity to animal testing~
○KAZUTOSHI SAITO[1], OSAMU TAKENOUCHI[1], TAKU NISHIJO[1], MASAAKI MIYAZAWA[1], HITOSHI SAKAGUCHI[1]
1)Kao Corporation, R&D - Safety Science Research

P-50 Improvement of alternative skin sensitization test method using vitrigel chamber (Vitirgel-SST method)
○Tadashi Uchino[1], Hiroshi Miyazaki[2], Kunihiko Yamashita[2], Hajime Kojima[1], Toshiaki Takezawa[3], Noriko Yamaguchi[4], Maki Nakamura[5], Masayuki Takaishi[6], Takumi Akiyama[1], Yosiaki Ikarashi[1]
1)National Institute of Health Sciences 2)Daicel Corporation, Himeji, Japan 3)National Institute of Agrobiological Sciences, Tsukuba, Japan 4)BoZo Research Center Inc.,Tokyo, Japan 5)Kobayashi Pharmaceutical Co., Ltd., Osaka, Japan 6)Mandom Corp., Osaka, Japan

P-51 Development of non-animal skin sensitization testing strategy applicable to various cosmetic ingredients
○TAKU NISHIJO[1], KAZUTOSHI SAITO[1], MASAAKI MIYAZAWA[1], HITOSHI SAKAGUCHI[1]
1)Safety Science Research, Kao Corporation, Tochigi, Japan

P-52 Conditioning of DPRA concerning peptide stability
○SHIHO OEDA[1], Takao Ashikaga[1], Morihiko Hirota[1], Akira Motoyama[1], Hirokasu Kozuki[1]
1)Safety Technology Development Group, Shiseido Reserch Center, Yokohama, Japan

P-53 Verification of a skin sensitization assessment neural network model by fragrance materials
○TOMOMI ATOBE[1], MORIHIKO HIROTA[1], TAKAO ASHIKAGA[1], Api Anne Marie[2], Lalko Jon[2]
1)Shiseido Research Center, Kanagawa, Japan 2)Reserch Institute for Fragrance Materials, Inc, NJ, USA

P-54 Value of interleukin-1α and interleukin-6 for development of a skin sensitization alternative method using HaCaT human keratinocyte cell line
○Jung-Eun Park[1], i-Hoon Jo[1], Da-Wn Jung[2], Seung-Hyeok Seok[2], Yong Heo[1]
1)Catholic University of Daegu, Dept. Occupational Health 2)Department of Microbiology and Immunology, College of Medicine, Seoul National University, Republic of Korea

P-55 Novel techniques for the prediction of skin sensitization using compound concentrations 2 orders of magnitude less than those used in conventional methods
○YUSUKE YAMAMOTO[1], TOSHIHIKO KASAHARA[1], YOSHIHIRO JIMBO[2], TAKANORI HIOKI[1], MASAHARU FUJITA[1]
1)Safety Evaluation Center, Ecology&Quality Management Div., Csr Div, FUJIFILM

Corporation, Kanagawa, Japan 2)Synthetic Organic Chemistry Laboratories, Research & Development Management Headquarters, FUJIFILM Corporation, Shizuoka, Japan

P-56 Evaluation of skin sensitizer by a novel skin sensitization test using collagen vitrigel membrane chambers

○HIROSHI MIYAZAKI[1], KUNIHIKO YAMASHITA[1], TADASHI UCHINO[2], HAJIME KOJIMA[2], TOSHIAKI TAKEZAWA[3]

1)Corporate Research Center , R & D Headquarters, Daicel Corporation, Hyogo, Japan 2)National Institue of Sciences, Tokyo, Japan 3)National Institute of Agrobiological Sciences, Tsukuba, Japan

P-57 Development of a Local Lymph Node Assay Modified by Diacel Based on ATP Content Elicitation (LLNA:DAE) method (second report)

○KUNIHIKO YAMASHITA[1,3], Shinsuke Shinoda[2], Saori Hagiwara[2], Hiroshi Itagaki[3]

1)Corporate Research Center, R & D Headquarters, Daicel Corporation, Hyogo, Japan 2)Drug Safety Testing Center Co., Ltd., Saitama, Japan 3)Faculty of Engineering, Dept. of Materials Science and Engineering, Yokohama National University, Kanagawa, Japan

P-58 Generation of luciferase-expressing-cell line using artificial chromosome vector

○Yoshihiro Nakajima[1], Mayu Yasunaga[1], Kazutoshi Murotomi[1], Tetsuya Ohbayashi[2], Mitsuo Oshimura[3]

1) Health Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), 2) Research Center for Bioscience and Technology, Tottori University, 3) Chromosome Engineering Research Center, Tottori University

P-59 Fundamental study of the SH test in skin sensitization assay

○MIKA TSURUMAKI[1], Sakiko Aizawa[1], Noriyasu Imai[1], Masato Nakade[1]

1)KOSE Corporation, Tokyo, Japan

P-60 Genomic/Epigenomic analyses of differentiation of HepaRG human hepatocyte progenitor cells

○SEIICHI ISHIDA[1], HELENE SCHNEIDER[2], TAKASHI KUBO[1], TAMAKI HORI[1], SHINICHIRO HORIUCHI[1], YUKIE KURODA[1], SU-RYANG KIM[1], ANNE CORLU[2], FABRICE MOREL[2], YUKO SEKINO[1]

1)Department of Pharmacology, National Institute of Health Sciences, Tokyo, Japan 2)INSERM UMR991, Rennes, France

P-61 Evaluation of Human Hepatocytes Cultured by Three-dimensional Spheroid Systems for Drug Metabolism

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P-62 Differentiation Muse cells into Hepatocytes and its maturation using miRNA

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P-63 Metabolome analysis and toxicity test of human fetal and adult hepatocytes

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P-64 A novel culture method of HepG2 cells useful for the analyses of pharmacokinetics: Sandwich-co-culture system involving endothelial cells on the liquid-gas interface utilizing a collagen vitrigel membrane chamber

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P-65 Prediction of transporter- and enzyme-mediated complicated drug-drug interaction: taking Cerivastatin, withdrawn from the market due to its induced rhabdomyolysis as an example of victim drug

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P-66 Prediction of drug transfer into milk taking into consideration the transporter-mediated transfer process

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P-67 Prediction of the rate-limiting step in the hepatic elimination of statins using sandwich-cultured human hepatocytes

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P-68 A mechanism enhancing macromolecule transport induced by poly-L-arginine in Caco-2 cell monolayers: Analysis of disappearance of tight junction proteins from cell-cell junctions

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P-69 Suitability of PDMS/PEG copolymer-impregnated membranes for prediction of drug permeation from transdermal products

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P-70 The comparison of novel dressings in vitro drug release testing

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P-71 Animal Alternative Test Researches in SCDC

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P-72 Usage of a hyperglycemic silkworm model for evaluation of anti-diabetic drugs

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P-73 JSAAE activities for WC9

○International Committee, Japanese Society for Alternatives to Animal Experiments (JSAAE)

P-74 JaCVAM update

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P-75 In Hepatotoxicity evaluation system construction which does not use the animal by the combination of silico and in vitro

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P-76 Development of alternative tests for reproductive and developmental toxicity: whole embryo culture in humanized CYP3A (CYP3A-HAC) mice

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P-77 Effects of kumisukutine on cultured rat embryos.
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P-78 Prediction of chemical-inducing hepatocyte hypertrophy in rats in vivo based on in vitro reporter assays
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P-79 Construction of a toxicity test database of pesticides for the toxicological characterization of hepatocyte hypertrophy
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P-80 Basal efflux of bile acids contributes to drug-induced bile acid-dependent hepatocyte toxicity in rat sandwich-cultured hepatocytes
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P-81 Construction of the co-cultured hepatocyte spheroids by microwell chip
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P-82 Confirmation of anticancer drug resistance mechanism using silicate fiber based 3D cell culture
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P-83 Fabrication of liver-like tissues in collagen gel beads
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P-84 Establishment a multicellular 3D liver model by co-culturing rat hepatocytes with TMNK-1 based on gas-permeable membranes for drug screening

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P-85 Electrochemical Cell Detachment using Zwitterionic Oligopeptides

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P-86 3D Culture of iPS cells under Pseudo Microgravity by RWV Bioreactor

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P-87 Rapid micromolding of osteon-like tissues

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P-88 Formation of co-cultured hepatocyte aggregates on oxygen permeable microwells and the evaluation of their tissue polarity

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P-89 Long term culture of human hepatocytes using hollow fiber type three dimensional culture module for application to the evaluation of drug toxicity

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