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## Day 1 Program Nov.17 (Tue)

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**Opening Remarks**

8:50~9:00

### **Symposium 1: Advanced technology for biopharmaceutical production**

9:00~11:00

Organizers: Ryuma Nagano (*Kyowa Kirin Co. Ltd.*)  
Kunihiko Kodaira (*Chugai Pharmaceutical Co., Ltd.*)

Outline: Demand for biopharmaceutical production with animal cell technology has been increasing with market expansion for biopharmaceuticals such as antibody drugs. To solve this issue, some advanced technologies are developing for production of biopharmaceuticals. This session will introduce the next-generation biomanufacturing upstream and downstream processes to discuss the future of the bioproduction from a scientific and industrial perspective.

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#### **S1-01 Intensification Of Fed-batch Culture Process With N-1 Perfusion Seed Culture**

9:00

**Narumi Kobayashi**, Yusaku Shimura, Zheng Pei, Mie Fukuda, Ryuma Nagano,  
Koichi Yamamoto  
*Process Development, Bio Process Research and Development Laboratories, Production Division, Kyowa Kirin Co., Ltd.*

#### **S1-02 Next Generation Upstream Bioprocess – Intensified Seed Train Processes**

9:30

**Janice Tan**<sup>1</sup>, Mona Bausch<sup>2</sup>, Allyson Fournier<sup>3</sup>  
*<sup>1</sup>Merck Pte Ltd, <sup>2</sup>Merck KGaA, <sup>3</sup>EMD Millipore Corp.*

#### **S1-03 Media and Process Development for Perfusion Cell Culture**

10:00

**Nobumasa Takao**<sup>1</sup>, Wataru Tanaka<sup>1</sup>, Ryota Nakajima<sup>1</sup>, Haruka Sano<sup>1</sup>, Kiyoshi Hirakawa<sup>1</sup>,  
Yosuke Watanabe<sup>1</sup>, Takuya Higuchi<sup>2</sup>, Shunpei Furomitsu<sup>2</sup>  
*<sup>1</sup>API Process Development Dept. (Biotechnology), Chugai Pharmaceutical Co., LTD., Japan,  
<sup>2</sup>Research Institute for Bioscience Products & Fine Chemicals, Ajinomoto Co., Inc.*

#### **S1-04 Process characterization of continuous downstream processes with the aid of mechanistic modelling**

10:30

Chyi-Shin Chen<sup>1,2</sup>, Noriko Yoshimoto<sup>1,2</sup>, **Shuichi Yamamoto**<sup>1,2</sup>  
*<sup>1</sup>Yamaguchi Univ., <sup>2</sup>Manufacturing Technology Association of Biologics*

**Break 11:00~11:30**

## Lunch Time Seminar 1: NICHIREI BIOSCIENCES INC.

11:30~12:30

### LS-01 Introduction of cell culture media and media development services by Jianshun BioSciences Co.,Ltd

11:30

Naoko Suzuki<sup>1</sup>, Chen Yu<sup>2</sup>

<sup>1</sup>Nichirei Biosciences Inc. <sup>2</sup>Jianshun BioSciences Co.,Ltd

## Exhibition Viewing 12:30~13:00

## Symposium 2: Advanced Cell Engineering -Emerging Technologies and Future Perspectives-

13:00~15:00

Organizers: Yoshinori Kawabe (*Kyushu University*)  
Masamichi Kamihira (*Kyushu University*)

Outline: Advances in single cell-based evaluation procedures and manipulation techniques have been accelerating. These technologies open new horizons for the generation of high producer clones of biopharmaceuticals and evaluation of cell function. This symposium provides insights by experts from academia and industry on the latest developments in single-cell research, current technologies for chromosome analysis, cell separation, and nanocarrier engineering for single-cell evaluation. In this symposium, we would also like to discuss future prospects and challenges on the “single cell” world with active participation of the audience.

### Opening Remarks

13:00

#### S2-01 Dissecting Human Development By Single Cell Transcriptomics

13:05

Akira Watanabe

*Medical Innovation Center, Kyoto Univ.*

#### S2-02 Combining Multicolor FISH and FISH is a Powerful Tool for Monoclonality Analysis of CHO Cell Banks

13:35

Seiji Yamauchi, Takahisa Genji

*chromocenter Inc.*

#### S2-03 Alternative electric field application induced enzyme-free cell detachment

14:05

Sumihiro Koyama, Masanori Wada, Yoshiyuki Tamura, Gen Ishikawa, Junji Kobayashi,  
Yoichi Ishikawa

*ABLE Corp.*

#### S2-04 Development of extracellular vesicle-based drug delivery systems by cellular engineering

14:25

Masaharu Somiya, Shun'ishi Kuroda

*Osaka University*

### Closing Remarks

14:55

## Break 15:00~15:30

**Technical Seminars: Nova Biomedical K.K.**

15:30~16:00

**TS-01** FLEX2 On-Line Autosampler: Fully Automated Sampling and Analysis of Key Cell Culture Parameters

15:30

**McRae Matt**

*Nova Biomedical*

**Technical Seminars: Sartorius Stedim Cellca GmbH**

**TS-02** Optimizing Cell Line Development by incorporating automation and data management technologies

15:45

**Thiele Kristin, Zauner Monika, Sanna Markus**

*Sartorius Stedim Cellca GmbH*

**Exhibition Viewing** 16:00~17:00

**Poster Session 1 Odd Numbers**

17:00~18:00

**Poster Session 1 Even Numbers**

18:00~19:00

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## Day 2 Program Nov.18 (Wed)

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### Plenary Lecture 1

9:00~9:50

Chair: Yutaka Miura (*Tokyo University of Agriculture and Technology*)

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#### PL-01 Proteogenomic landscape of extracellular vesicles (EVs): functional insights and diagnostic potential

9:00

**Richard J. Simpson**

*Department of Biochemistry and Genetics | La Trobe Institute for Molecular Science (LIMS) La Trobe University, Melbourne, Victoria 3086 Australia*

**Break 9:50~10:30**

### Symposium 3: Frontier science for the exosome and extracellular microparticle research by next-generation researchers

10:30~12:00

Organizers: Taichi Hara (*Waseda University*)

Yutaka Miura (*Tokyo University of Agriculture and Technology*)

Outline: It is becoming clear that cellular communication through extracellular microparticles such as the exosome plays an important role in various biological regulation and disease development. This symposium will focus on exosomes and extracellular particles, and up-and-coming researchers in these research fields will introduce cutting-edge topics. We would also like to discuss the possibilities and problems of industrial application of exosomes.

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#### Opening Remarks

10:30

#### S3-01 Role of Extracellular Vesicles in Cancer: Possible Diagnostic and Therapeutic Applications

10:34

**Yusuke Yoshioka, Takahiro Ochiya**

*Tokyo Medical University, Japan*

#### S3-02 A nanopipette-based direct extraction method of intraluminal membrane vesicles

11:02

**Hiroki Ida**<sup>1,2,3,4</sup>, Akishika Kumatani<sup>3,4</sup>, Takeshi Yoshida<sup>5</sup>, Rikinari Hanayama<sup>5</sup>,  
Yasufumi Takahashi<sup>2,5</sup>

<sup>1</sup>Tohoku Univ. FRIS, <sup>2</sup>JST PREST, Japan, <sup>3</sup>Tohoku Univ. AIMR, Japan,

<sup>4</sup>Tohoku Univ. Graduate School of Environmental Studies, Japan, <sup>5</sup>Kanazawa Univ. WPI Nano-LSI, Japan

#### S3-03 Discovery of extracellular protein degradation system in a blood

11:30

**Eisuke Itakura, Momoka Chiba, Ayaka Tomihari, Akira Matsuura**

*Chiba Univ.*

#### Closing Remarks

11:58

**Break 12:00~12:30**

## Lunch Time Seminar 2: Pall Corporation

12:30~13:30

### **LS-02** Commercial viral vector manufacturing: Current and future state, challenges and opportunities

12:30

**Rachel Legmann**

*Pall Corporation*

## Exhibition Viewing 13:30~14:00

## Symposium 4: From Basic research toward practical application

14:00~16:00

Organizers: Shinobu Kuwae (*Takeda Pharmaceutical Company*)

Ryuji Kato (*Nagoya University*)

Hiroko Tsukamoto (*AGC Inc.*)

Hiroyuki Ijima (*Kyushu University*)

Outline: A variety of iPS cell-derived regenerative medicines, such as retinal pigment epithelium, corneal cell sheets, and cardiomyocytes are now being investigated as clinical research and clinical trials. To widen therapeutic area application of iPS cell-derived cells, extensive researches are also being carried out in a wide variety of fields. In this symposium, insights of basic research and application research of pancreatic beta cells, as well as application of iPS cell-derived cells to cancer therapy and drug development will be provided.

### **S4-01** Directed differentiation of pluripotent stem cell-derived pancreatic beta cells

14:00

**Shoen Kume**

*Tokyo Tech.*

### **S4-02** Generation of the iPSC-derived pancreatic islet cell (iPIC) for cell therapy against type 1 diabetes

14:30

**Taro Toyoda**<sup>1,2</sup>

<sup>1</sup>*Kyoto Univ.*, <sup>2</sup>*T-CiRA*

### **S4-03** Your cancer, your cells, your cure

15:00

**Yasumichi Hitoshi**

*Thyas Co Ltd*

### **S4-04** iPS Cells Are Expected as a New Research Tool for Drug Development

15:30

**Tamihide Matsunaga**

*Nagoya City University*

## Exhibition Viewing 16:00~17:00

**O-01** Development of a Robust Quality Prediction Model Using Morphological Information

17:00

Yuto Takemoto<sup>1</sup>, Yuta Imai<sup>1</sup>, Kei Kanie<sup>1</sup>, Ryuji Kato<sup>1,2</sup><sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ.**O-02** Determination of mass transfer coefficient with sparged bubble analysis in stir tank bioreactors

17:15

Yusuke Tomioka<sup>1</sup>, Koichi Kamekura<sup>2</sup>, Chinatsu Minagawa<sup>2</sup>, Janice Tan<sup>3</sup>, Lee Madrid<sup>4</sup>, Takao Ito<sup>1</sup><sup>1</sup>Merck Ltd. Japan, <sup>2</sup>IHI Plant Services Corporation, <sup>3</sup>Merck Ltd. Singapore, <sup>4</sup>MilliporeSigma coop. USA**O-03** Quantitative Analysis of Operator's' Flow Line in the Cell Culture for Controlled Manual Operation

17:30

Kei Kanie<sup>1</sup>, Hiroto Sasaki<sup>2</sup>, Yurika Ikeda<sup>1</sup>, Fumio Togawa<sup>3</sup>, Masaki Tamada<sup>3</sup>, Ryuji Kato<sup>1,4</sup><sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Grad. Sch. Eng. Sci., Nagoya Univ.,<sup>3</sup>KOZO KEIKAKU ENGINEERING Inc., <sup>4</sup>Inst. Nano-Life-Systems, Nagoya Univ.**O-04** Image-based Cellular Condition Monitoring for Biopharmaceutical Production Cells

17:45

Takumi Hisada<sup>1</sup>, Masaya Fujitani<sup>1</sup>, Kei Kanie<sup>1,2</sup>, Ryuji Kato<sup>1,2</sup><sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ.**O-05** Data Augmentation Method for Morphological Stem Cell Quality Prediction

18:00

Kazue Kimura<sup>1</sup>, Yuto Takemoto<sup>1</sup>, Kei Kanie<sup>1,2</sup>, Ryuji Kato<sup>1,2</sup><sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ.**O-06** CHO-MK Cells Culture Studies Using A Single-Use Bioreactor Exhibit Rapid Growth And High Monoclonal Antibody Titers

18:15

Kenichi Horiuchi<sup>1</sup>, Junshin Iwabuchi<sup>2</sup>, Masashi Nasukawa<sup>2</sup>, Takayuki Horiuchi<sup>2</sup><sup>1</sup>Nihon Pall Ltd., Japan, <sup>2</sup>Chitose Laboratory Corp., Japan

**O-07** Transcriptome analysis of immortalized dermal papilla cells with combinatorial expression of cell cycle regulators or oncogenes

17:00

Tomokazu Fukuda<sup>1</sup>, Kouhei Takahashi<sup>1</sup>, Ai Orimoto<sup>1</sup>, Sayo Kashiwagi<sup>2</sup>, Tohru Kiyono<sup>3</sup>, Tsuyoshi Ishii<sup>2</sup>

<sup>1</sup>Iwate Univ, Graduate School of Science and Engineering,

<sup>2</sup>Rohto Pharmaceutical Co., Ltd., Basic Research Development Division,

<sup>3</sup>Division of Carcinogenesis and Prevention, National Cancer Center Research Institute

**O-08** Novel Cyclic N-alkyl Peptides as BFGF Mimetics to Maintain the Pluripotency of Human Induced Pluripotent Stem Cells

17:15

Masashi Sato<sup>1</sup>, Hiromi Tanaka<sup>2</sup>, Yoshitsugu Ohnuki<sup>1,2</sup>, Shinji Masui<sup>1,2,3</sup>, Takashi Kawakami<sup>1,2,4</sup>, Hiroshi Kurosawa<sup>1,2</sup>

<sup>1</sup>Integrated Graduate School of Medicine, Engineering, and Agricultural Sciences, University of Yamanashi, Japan,

<sup>2</sup>Department of Biotechnology, Faculty of Life and Environmental Sciences, University of Yamanashi, Japan,

<sup>3</sup>Advanced Biotechnology Center, University of Yamanashi, Japan, <sup>4</sup>JST, PRESTO, Japan

**O-09** Image-based Evaluation of Vibration Effect on iPS Cells for Safe Cell Transportation

17:30

Tomoya Ito<sup>1</sup>, Teppei Sakai<sup>1</sup>, Kei Kanie<sup>1,2</sup>, Ryuji Kato<sup>1,2</sup>

<sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ.

**O-10** Morphological Phenotype-based Screening enhanced by CRISPR/Cas9

17:45

Yuto Okumura<sup>1</sup>, Yuta Imai<sup>1</sup>, Kei Kanie<sup>1,2</sup>, Ryuji Kato<sup>1,2</sup>

<sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ.

**O-11** Combinatorial Analysis of Linker-Effect on Short Cell-adhesion Peptides

18:00

Akiyo Fujimoto<sup>1</sup>, Kei Kanie<sup>1,2</sup>, Aika Ogata<sup>3</sup>, Yuji Narita<sup>3</sup>, Ryuji Kato<sup>1,2</sup>

<sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ.,

<sup>3</sup>Nagoya Univ. Grad. Sch. Med.

**O-12** Development of Adhesion Barrier Sheet Functionalized with Cell-Selective Adhesion Peptides

18:15

Ayato Sugiyama<sup>1</sup>, Kei Kanie<sup>1,2</sup>, Koichiro Uto<sup>3</sup>, Mitsuhiro Ebara<sup>3</sup>, Aika Ogata<sup>4</sup>, Yuji Narita<sup>4</sup>, Ryuji Kato<sup>1,2</sup>

<sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ., <sup>3</sup>Natl. Inst. Mat. Sci.,

<sup>4</sup>Nagoya Univ. Grad. Sch. Med.

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## Day 3 Program Nov.19 (Thu)

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### Symposium 5: Current issues on subvisible particles in biopharmaceuticals

9:00~11:00

Organizers: Susumu Uchiyama (*Osaka University*)  
Kohei Tsumoto (*The University of Tokyo*)

Outline: Biopharmaceuticals like antibody drugs are widely used. Micron-sized particles (subvisible particles) in biopharmaceuticals are regarded as a potential cause of immunogenicity. In this symposium, focusing on subvisible particles in biopharmaceuticals, regulatory aspect, machine learning based analysis, relation to container closure system and influence at the clinical scene of the particles will be introduced from researchers in different countries. Future perspectives on regulatory aspects, analysis and control of subvisible particles will be also discussed.

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#### Introduction

9:00

#### **S5-01 Issues on quality control of biopharmaceuticals from regulatory perspective**

9:10

**Hiroko Shibata**, Masato Kiyoshi, Akira Harazono, Akiko Ishii-Watabe  
*National Institute of Health Sciences*

#### **S5-02 Recent developments of container closure system for biopharmaceuticals**

9:35

**Susumu Uchiyama**<sup>1,2,3</sup>  
<sup>1</sup>*Osaka Univ., Japan*, <sup>2</sup>*ExCLELLS, Japan*, <sup>3</sup>*Kyoto Univ., Japan*

#### **S5-03 Statistical Pattern Recognition Approaches for the Identification of Subvisible Particles and Stress Sources in FIM Images**

10:00

**Arni Eguna Gambe-Gilbuena**<sup>1</sup>, Yuriko Shibano<sup>2</sup>, Elena Krayukhina<sup>3</sup>, Tetsuo Torisu<sup>2</sup>,  
Susumu Uchiyama<sup>2,3,4</sup>  
<sup>1</sup>*Department of Biology, School of Science and Engineering, Ateneo de Manila University*,  
<sup>2</sup>*Department of Biotechnology, Graduate School of Engineering, Osaka University*,  
<sup>3</sup>*Research Department, U-Medico Inc.*,  
<sup>4</sup>*Department of Creative Research, Exploratory Research Center on Life and Living Systems, National Institutes of Natural Sciences*

#### **S5-04 Release of Silicone Oil from Syringes: Clinical Implications in Ophthalmology**

10:25

**Gustavo Barreto Melo**<sup>1,2</sup>  
<sup>1</sup>*Federal University of São Paulo, Brazil*, <sup>2</sup>*Sergipe Eye Hospital, Brazil*

#### Discussion

10:55

**Break 11:00~11:30**



**O-13 Morphology-based Profiling of Drug Responses in Heterogeneous Neural Cell Population**  
11:30

**Yuta Imai**<sup>1</sup>, Kei Kanie<sup>1,2</sup>, Masahisa Katsuno<sup>3</sup>, Ryuji Kato<sup>1,2</sup>

<sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Inst. Nano-Life-Systems, Nagoya Univ.,

<sup>3</sup>Nagoya Univ. Grad. Sch. Med.

**O-14 Non-invasive Quality Evaluation of Spheroids using Near-Infrared Light Information**  
11:45

**Miki Nagai**<sup>1</sup>, Ryohei Yamamoto<sup>1</sup>, Mayu Shibuta<sup>1</sup>, Kei Kanie<sup>1</sup>, Yoko Igarashi<sup>2</sup>, Hiroshi Suganuma<sup>2</sup>, Ryuji Kato<sup>1,3</sup>

<sup>1</sup>Grad. Sch. Pharm. Sci., Nagoya Univ., <sup>2</sup>Sumitomo Electric Industries, Ltd.,

<sup>3</sup>Inst. Nano-Life-Systems, Nagoya Univ.

**O-15 Effect of ROCK Inhibitor on Aggregate Formation of Human Induced Pluripotent Stem Cells in Suspension Culture**  
12:00

**Takaki Matsumoto**, Mee-hae Kim, Masahiro Kino-oka

Osaka Univ., Japan

**O-16 N-linked Glycan Analysis Of The Shark-derived Antibody Expressed By Chinese Hamster Ovary Cells**  
12:15

**Hajime Enatsu**, Nako Okamoto, Noriko Yamano-Adachi, Yuichi Koga, Takeshi Omasa

Graduate School of Engineering, Osaka University, JAPAN

**Break 12:30~13:00**

**LS-03 Merck GMP solutions for Cell and Gene Therapy Upstream manufacturing**  
13:00

**Sadao Ozawa**

Merck Limited

**Exhibition Viewing 14:00~14:45**

**Break 15:45~16:15**

**O-17** Screening Of Molecules That Facilitate Transition From Mouse Embryonic Stem Cells To Early-Embryonic-Like Cells

16:15

**Aoi Murakami**, Yoshitsugu Ohnuki, Shinji Masui, Hiroshi Kurosawa  
*University of Yamanashi*

**O-18** Analysis of Relationship between Fluid-like Behavior and Cell-cell Adhesion in Corneal Epithelial Cell Sheet by Using Kinetic Model

16:30

**Junya Kamioka**<sup>1</sup>, Kei Sasaki<sup>1</sup>, Thi Nhu Trang Nguyen<sup>1</sup>, Koichi Baba<sup>1</sup>, Tomoyo Tanaka<sup>2</sup>, Yosuke Teranishi<sup>2</sup>, Takahiro Ogasawara<sup>2</sup>, Masukazu Inoie<sup>2</sup>, Ken-ichiro Hata<sup>2</sup>, Kohji Nishida<sup>1</sup>, Masahiro Kino-oka<sup>1</sup>  
<sup>1</sup>*Osaka Univ., Japan*, <sup>2</sup>*Japan Tissue Engineering Co., Ltd.*

**O-19** Primitive Endoderm Cells Promote Proliferation And Differentiation Of Pluripotent Stem Cells

16:45

**Takumi Iwama**, Yoshitsugu Ohnuki, Shinji Masui, Hiroshi Kurosawa  
*University of Yamanashi*

**O-20** Novel Strategies On Avian Stem Cell Engineering

17:00

**Hiroshi Kagami**  
*Shinshu Univ.*

**Break 17:15~17:45**

Chair: Masamichi Kamihira (*Kyushu University*)

**PL-02** Advances in bioprocessing and analytics to accelerate vaccine production

17:45

**Antonio Roldão**  
*iBET & ITQB NOVA*

Chair: Takeshi Omasa (*Osaka University*)

**PL-02** Development and Characterization of VLP-based recombinant vaccines

18:35

**Francesc Gòdia**, Laura Cervera  
*Grup d'Enginyeria Cel·lular i Bioprocessos Universitat Autònoma de Barcelona*

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## Day 4 Program Nov.20 (Fri)

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**Poster Session 2 Odd Numbers**

9:00~10:00

**Poster Session 2 Even Numbers**

10:00~11:00

**Break** 11:00~11:10

**Plenary Lecture 3**

11:10~12:00

Chair: Tohru Koda (*Kobe University*)

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**PL-03** The improvement of food bioactives on gastric and brain health

11:10

**Chin-Kun Wang**

*Chung Shan Medical University, Taichung, Taiwan*

**Break** 12:00~12:30

**Lunch Time Seminar 4: Thermo Fisher Scientific**

12:30~13:30

**LS-04** ① Gibco PD-Express Services / ② Next Generation of Single Use Bioreactors

12:30

**Albert Cheong**

*Thermo Fisher Scientific Associate Director, Services and Product Applications*

**Exhibition Viewing** 13:30~14:15

**O-21 Gibco Bioprocessing: High-Intensity Perfusion CHO Medium**

14:15

**Albert Cheong**

*Thermo Fisher Scientific*

**O-22 Raman Spectroscopy as a QbD Tool For Biopharmaceutical Production**

14:30

**Henry Weichert**

*Sartorius Stedim Biotech GmbH*

**O-23 Culture Condition Optimization For Fed-Batch Processes Of A CHO Cell Line Producing A Virus-Like Particle Vaccine Candidate**

14:45

**Thao Bich Nguyen<sup>1</sup>**, Guirong Kanai<sup>1</sup>, Noriko Yamano-Adachi<sup>1,2</sup>, Takeshi Omasa<sup>1,2</sup>

<sup>1</sup>*Osaka University*, <sup>2</sup>*Manufacturing Technology Association of Biologics, Hyogo, Japan*

**O-24 Involvement of circadian disruption in AhR-caused fatty liver and wasting syndrome**

15:00

**Takuya Nomura**, Tomoya Kitakaze, Hitoshi Ashida

*Grad. Sch. of Agric. Sci., Kobe Univ.*

**O-25 Effect of Argania spinosa L. leaves and its saponin-rich fraction on melanogenesis in vitro**

15:15

**Myra O. Villareal<sup>1,2,3</sup>**, Thanyanan Chaochaiphath<sup>3</sup>, Thouria Bourhim<sup>4</sup>, Rachida Makbal<sup>4</sup>, Chemseddoha Gadhi<sup>4</sup>, Hiroko Isoda<sup>1,2,3</sup>

<sup>1</sup>*Alliance for Research on the Mediterranean and North Africa (ARENA), University of Tsukuba, Japan*,

<sup>2</sup>*Faculty of Life and Environmental Sciences, University of Tsukuba, Japan*,

<sup>3</sup>*School of Integrative and Global Majors, University of Tsukuba, Japan*,

<sup>4</sup>*Faculty of Sciences Semlalia, Cadi Ayyad University, Morocco*

**O-26 Delphinidin Suppresses Muscle Atrophy And Upregulates MicroRNA-23a Expression In Extracellular Vesicles Derived From Intestinal Cells**

15:30

**Yuki Marugame<sup>1</sup>**, Motoki Murata<sup>1,2</sup>, Megumi Goto<sup>1</sup>, Yoshinori Fujimura<sup>1</sup>, Hirofumi Tachibana<sup>1</sup>

<sup>1</sup>*Division of Applied Biological Chemistry, Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University, Japan*,

<sup>2</sup>*Advanced Research Support Center (ADRES), Ehime University, Japan*

**O-27 The Plant Extract Ameliorates Cognitive Decline in Senescence Model SAMP8 Mice: Modulation of Neural Development and Energy Metabolism**

15:45

**Kengo Iwata<sup>1,2</sup>**, Qingqing Wu<sup>3,5</sup>, Farhana Ferdousi<sup>3,4</sup>, Kazunori Sasaki<sup>3,4</sup>, Kenichi Tominaga<sup>4</sup>, Haruhisa Uchida<sup>2</sup>, Yoshinobu Arai<sup>2</sup>, Francis G Szele<sup>5</sup>, Hiroko Isoda<sup>1,3,4,6</sup>

<sup>1</sup>*School of Integrative and Global Majors (SIGMA), University of Tsukuba, Japan*, <sup>2</sup>*Nippo Co., Ltd., Japan*,

<sup>3</sup>*Alliance for Research on the Mediterranean and North Africa (ARENA), University of Tsukuba, Japan*,

<sup>4</sup>*National Institute of Advanced Industrial Science and Technology (AIST)-University of Tsukuba Open Innovation Laboratory for Food and Medicinal Resource Engineering (FoodMed-OIL), AIST, University of Tsukuba, Japan*,

<sup>5</sup>*Department of Physiology, Anatomy and Genetics, University of Oxford, United Kingdom*,

<sup>6</sup>*Faculty of Life and Environmental Sciences, University of Tsukuba, Japan*

**O-28 Lipid Metabolism Profile in Human Hepatocytes Freshly Isolated from Chimeric Mice with Humanized Liver**

16:00

**Masaki Takahashi<sup>1</sup>**, Masakazu Kakuni<sup>1</sup>, Sayaka Tomatsu<sup>2</sup>, Keishi Hata<sup>2</sup>

<sup>1</sup>*PhoenixBio Co., Ltd.*, <sup>2</sup>*Akita research institute of food and brewing*

**O-29** A Human Induced Pluripotent Stem Cell-Based Model to Study Early Endoderm Development  
16:15

Masaki Kuroda, Mee-Hae Kim, Masahiro Kino-oka  
*Osaka Univ, Japan*

**Break 16:30~17:00**

**Symposium 6: Cutting Edge of Food and Health Science**

**17:00~19:00**

Organizers: Hideo Satsu (*Maebashi Institute of Technology*)  
Tadashi Yoshida (*Tokyo University of Agriculture and Technology*)  
Tohru Koda (*Kobe University*)

Outline: The research for disease prevention and health promotion by food substances has been progressed in recent years. In this session, we will focus on the recent advances in food and health science. The current and future perspectives in this field will also be discussed.

**S6-01** Tightening the gap between *in vitro* and *in vivo* by using advanced cellular models for industrial applications  
17:00

Michael Krohn  
*B.R.A.I.N. AG, Zwingenberg – Germany*

**S6-02** Anti-inflammatory and Immune Modulatory Mechanisms Mediated by Lactic Acid Bacteria and Fermented Foods  
17:40

Noriko M. Tsuji  
*National Institute of Advanced Industrial Science and Technology (AIST)*

**S6-03** Development of Functional Materials to Improve Respiratory Diseases  
18:10

Hee Soon Shin  
*Korea Food Research Institute*

**S6-04** Functional Cooperation of Physiological Urate Transporters and Their Modification by Food Components  
18:30

Tappei Takada<sup>1</sup>, Yu Toyoda<sup>1</sup>, Hiroshi Miyata<sup>1</sup>, Hideo Satsu<sup>2</sup>, Hirotaka Matsuo<sup>3</sup>, Kimiyoshi Ichida<sup>4</sup>, Hiroshi Suzuki<sup>1</sup>

<sup>1</sup>Univ. of Tokyo Hosp., <sup>2</sup>Maebashi Inst. of Tech., <sup>3</sup>Natl. Def. Med. Col., <sup>4</sup>Tokyo Univ. of Pharm. & Life Sci.

**Award Ceremony/Closing Remarks**

**19:00~19:15**