Day 1 Program Dec. 8 (Mon)

Opening Remarks 13:00~13:15 Lecture Room 1 [12F Conference Hall]

Symposium 1: Recent advances in alternatives to animal testing
13:15~15:15 Lecture Room 1 [12F Conference Hall]

Organizers: Yoshinori Katakura*(Kyushu University)*, Hiroko Isoda*(University of Tsukuba)*

This symposium has been organized with the aim of providing information on topics related to food and health. We will introduce new initiatives, including alternative methods to animal testing for safety and functional evaluations of foods and pharmaceuticals. In particular, we request presentations on examples of functional testing systems for foods and pharmaceuticals using iPS cells and organoid-derived intestinal and liver cells, as well as new approaches to safety evaluations.

S1-01 13:15 Human iPS Cell-Derived Intestinal Cells Useful for Drugs and Functional Foods Development

Tamihide Matsunaga

Nagoya City University

S1-02 13:55 Trends in the Development of New Approach Methodologies (NAMs) and their Application to the Safety Assessment of Pharmaceuticals, foods, and Chemicals

Seiichi Ishida

Sojo University

S1-03 14:35 Development Of Organoid-derived Enterocytes And Hepatocytes From Human iPS Cells For Pharmaceutical Research

Hiroyuki Mizuguchi[1, 2, 3, 4, 5]

[1]*Graduate School of Pharmaceutical Sciences, The University of Osaka, Osaka, Japan,*

[2]*The Center for Advanced Medical Engineering and Informatics, The University of Osaka, Osaka, Japan,*

[3]*Integrated Frontier Research for Medical Science Division, Institute for Open and Transdisciplinary Research Initiatives (OTRI), The University of Osaka, Osaka, Japan,*

[4]*Center for Infectious Disease Education and Research (CiDER), The University of Osaka, Osaka, Japan,*

[5]*National Institute of Biomedical Innovation, Osaka, Japan*

Symposium 2: Future of cell manufacturing 15:30~17:30 Lecture Room 1 [12F Conference Hall]

Organizers: Masahiro Kino-oka*(The University of Osaka)*, Ryuji Kato*(Nagoya University)*

This symposium will introduce technologies that contribute to the manufacture of cell processing products for regenerative medicine and cell therapy. In particular, The symposium will promote understanding by presenting the latest technologies related to process control, quality control, QbD, manufacturing stability, prediction, and efforts toward actual manufacturing, and will hold discussions that lead to future prospects.

S2-01 15:30 Biophysical Immune Cell Phenotyping for Ensuring CAR-T Cell Therapy Efficacy and Safety

Kerwin Kwek Zeming[1], Wei-Xiang Sin[1], Kwan Zen Nicholas Tan[1], Yen Hoon Luah[1], Francesca Lorraine Wei Inng Lim[2], Michaela Su-Fern Seng[3], Yunxin Chen[2], Michael Birnbaum[1, 4], **Jongyoon Han**[1, 4]

[1]*SMART Centre, Singapore,* [2]*Singapore General Hospital, Singapore, Singapore,*

[3]*KK Women's and Children's Hospital, Singapore,* [4]*Massachusetts Institute of Technology*

S2-02 16:00 **Enhancing iPSC Differentiation Synchrony through Mechanical Memory Modulation by Botulinum Hemagglutinin**

Mee-Hae Kim[1], Masahiro Kino-oka[1, 2]

[1]*Department of Biotechnology, Graduate School of Engineering, The University of Osaka,*

[2]*Research Base for Cell Manufacturability, The University of Osaka*

S2-03 16:25 **AI-based Cell Image Analysis as Process Analytical Technology to Accelerate QbD-based Process Development**

Ryuji Kato

Nagoya Univ.

S2-04 16:50 **Closed system automation for autologous iPSC manufacture and quality management using commercial culture platforms**

Masayoshi Tsukahara

CiRA Foundation, Kyoto Univ.

S2-05 17:15 **Future Prospects for Cell Manufacturing**

Masahiro Kino-oka

The University of Osaka

Day 2 Program Dec. 9 (Tue)

Plenary Lecture 1

8:45~9:25 Lecture Room 1 [12F Conference Hall]

Chair: Takeshi Omasa*(The University of Osaka)*

PL1 Spatiotemporal heterogeneity of *in vivo* immune systems elucidated by intravital optical imaging technologies

Masaru Ishii

Department of Immunology and Cell Biology, Graduate School of Medicine, The University of Osaka

Symposium 3: Digital & Data Share for Cell / Cell Culture Engineering

9:35~11:35 Lecture Room 1 [12F Conference Hall]

Organizer: Takeshi Omasa*(The University of Osaka)*

Digitalization and data sharing are becoming increasingly important in cell/cell culture engineering. This symposium will focus on genome-scale modeling, omics analysis, and international collaborative research, and will discuss recent results and the current state of international collaboration.

Intoroducion

9:35

S3-01 [Key Note] Towards Self-Driving Biomanufacturing with Bioprocess Digital Twins

9:40

Dong-Yup Lee

Sungkyunkwan University

S3-02 Omics Approach: Distinct Biological Processes and Pathways of Fast-Growing CHL-YN Cells from CHO Cells

10:15

Yu Tsunoda[1], Rintaro Arishima[1], Tatiana Boronina[2], Robert Cole[2], Noriko Yamano-Adachi[1, 3, 4], Michael Betenbaugh[5], Takeshi Omasa[1, 3, 4]

[1]*Graduate School of Engineering, The University of Osaka, Japan,*

[2]*Mass Spectrometry and Proteomics Facility, Johns Hopkins University School of Medicine, USA,*

[3]*Manufacturing Technology Association of Biologics, Japan,*

[4]*Industrial Biotechnology Initiative Division, Institute for Open and Transdisciplinary Research Initiatives, The University of Osaka, Japan,*

[5]*Department of Chemical and Biomolecular Engineering, Johns Hopkins University, USA*

S3-03 Advances in media optimization using data-driven approach and media blending

10:40

Hirotaka Kuroda[1, 2, 3], Kazuya Sorada[1, 2, 3], Masahiro Yamazaki[1, 2, 3], Noriko Yamano Adachi[1], Takeshi Omasa[1]

[1]*Grad. Sch. Eng., UOsaka.,* [2]*Shimadzu Corp.,* [3]*Shimadzu Analytical Innovation Research Lab.*

S3-04 Accelerating Bioprocess Development for Antibody Production Using AI-Driven Optimization Technologies

11:05

Keisuke Shibuya[1], Muneyoshi Okamoto[2], Masayoshi Onitsuka[3], Miyu Omatsu[4], Hiroe Amou[3], Natsumi Takeda[2], Hiroaki Kato[2], Masashi Oda[2], Kenichiro Oka[1]

[1]*Bio and Pharmaceuticals Business Development Department, Value Chain Business Development Division, Hitachi, Ltd.,*

[2]*Pharmaceutical & Biopharmaceuticals Engineering Division, Engineering Division, Hitachi Plant Services Co., Ltd.,*

[3]*Graduate School of Technology, Industrial and Social Sciences, Tokushima University,*

[4]*Graduate School of Science and Technology for Innovation, Tokushima University*

Conclusion

11:30

Luncheon Seminar 1 — 11:50~12:40 — Lecture Room 1 [12F Conference Hall]

LS-1 **Characterizations of Lentivirus Vector for Gene Therapy**

Susumu Uchiyama
Department of Biotechnology, Graduate School of Engineering, The University of Osaka

Sponsor: TOSOH CORPORATION

Poster odd-number — 12:50-13:30 — Poster Room [12F Conference Hall & 1202]

Poster even-number — 13:30-14:10 — Poster Room [12F Conference Hall & 1202]

ESACT Plenary Lecture 1 — 14:20~14:50 — Lecture Room 1 [12F Conference Hall]

Chair: Yoshinori Katakura*(Kyushu University)*

EPL-1 14:20 **Addressing the data & modeling challenges: Pseudo-perfusion experimentation illuminates CHO-cell behavior under perfusion conditions to facilitate continuous biomanufacturing**

Eleftherios Terry Papoutsakis, Nikola G Malinov, Shivam Barodiya, Marianthi G Ierapetritou
University of Delaware

ESACT Plenary Lecture 2 — 14:50~15:20 — Lecture Room 1 [12F Conference Hall]

Chair: Yoshinori Katakura*(Kyushu University)*

EPL-2 **Debottlenecking vaccine design and manufacturing**

Antonio Roldao
Cell-based Vaccines Development Lab, Animal Cell Technology Unit, iBET, Oeiras, Portugal

Technical Seminar 1 — 15:30~16:30 — Lecture Room 1 [12F Conference Hall]

TS-1 15:30 **Enhancing CHO Cell Line Development with CELL HANDLER2 for Monoclonal Antibody Manufacturing**

Juan Betancur
Process Development, Renzoku Biologics Inc., Japan

Sponsor: Yamaha Motor Co,. Ltd

TS-2 15:50 **Impact of New GlycoForm® Feeds on metabolic flexibility of CHO-GS cells expressing Adalimumab**

Hemasunder Reddy
Pfanstiehl, Inc.

Sponsor: Pfanstiehl, Inc

Symposium 4: Bioproduction - Cutting-edge technologies for acceleration of development 16:40~18:40 Lecture Room 1 [12F Conference Hall]

Organizers: Yasuhiro Takagi*(Astellas Pharma)*, Tomohiro Doi*(U-Medico Inc.)*

Recent advances in cell line development have significantly accelerated biologics manufacturing. This symposium will highlight innovative technologies and strategies in cell line development aimed at enhancing stability, productivity, product quality, and process robustness, as well as shortening timelines for drug development. Experts will present state-of-the-art technologies, case studies, and future perspectives, providing attendees with valuable insights into overcoming current challenges and exploring new opportunities in cell line development and its applications.

S4-01 Developing a Robust Biologics Cell Line and Process Platform for Enhanced Speed and Productivity
16:40

Christina Alves
Takeda Pharmaceuticals

S4-02 Accelerating the DNA to IND Process: Streamlining Cell Line Development and Upstream Process Development at Kyowa Kirin
17:10

Tsuyoshi Yamaguchi, Keina Yamaguchi, Ryuma Nagano
Kyowa Kirin

S4-03 A Next-Generation Upstream Platform for Biotherapeutics: Achieving Industry-Leading Productivity and Shortened Timelines through Targeted Integration and Cell Engineering
17:40

Kenta Komura, Yuka Oishi, Hirona Moronaga, Tomoka Kunii, Shodai Komatsu, Kiyoshi Hirakawa
CHUGAI PHARMACEUTICAL CO.,LTD.

S4-04 CMC Strategy Of Bispecific Antibodies At IND Stage
18:10

Sherry Gu
WuXi Biologics

Day 3 Program Dec. 10 (Wed)

Plenary Lecture 2 — 9:00~9:40 Lecture Room 1 [12F Conference Hall]

Chair: Makoto Sadamitsu*(Takeda Pharmaceutical Company Limited)*

PL2 9:00 Evolution of downstream process of biologics is spurred by cell culture/cell engineering advancements

Shuichi Yamamoto[1, 2]
[1]*Yamaguchi University, Ube, Japan,* [2]*Manufacturing Technology Association of Biologics, Tokyo, Japan*

Symposium 5: Bioproduction - New technology for cell culture and purification — 9:50~11:50 Lecture Room 1 [12F Conference Hall]

Organizers: Masayoshi Onitsuka*(Tokushima Univ.)*, Yoshinori Kawabe*(Kyushu Univ.)*

Recent advances in upstream and downstream processes have greatly improved the efficiency and reliability of biologics manufacturing. This symposium will highlight innovative technologies and strategies in cell culture optimization, process intensification, and novel purification methods to enhance yield, consistency, and cost-effectiveness. Experts will present state-of-the-art technologies, case studies, and future perspectives, providing attendees with valuable insights into addressing current challenges and driving further progress in culture and purification process development.

S5-01 9:50 Novel bispecific antibody technology and challenges for enhanced production in CHO cell culture process

Ryuma Nagano, Narumi Tsukada, Tsuyoshi Yamaguchi, Kosuke Kuroda
Kyowa Kirin

S5-02 10:20 Model-Based Scale-up of Cell Culture Processes for Accelerated Technology Transfer

Emmanuel Anane[1], Francesco Vigato[2], Pau C. Bori[2], Budi Juliman[2]
[1]*Fujifilm Biotechnologies USA,* [2]*Fujifilm Biotechnologies Denmark*

S5-03 10:50 Scale-up Approach and Validation of ABEC Custom Single Run (CSR®) Bioreactors for High-Density CHO Cell Culture

Hironori Nishino[1], Hirofumi Kakihara[1], Masato Hoshino[1], Kana Yamamoto[1], Rosane Rech[2], Daniel Miller[2], Dimitra Aggeli[2], Ram Vutpala[2]
[1]*Daiichi Sankyo Co., Ltd.,* [2]*ABEC, Inc.*

S5-04 11:20 Development and Implementation into GMP manufacturing of Continuous Capture Chromatography

Sumiko Hasegawa, Hirohisa Takeuchi, Mitsuru Nonogawa, Yasuo Chuman, Jeonghyun Son, Takashi Kaminagayoshi
Takeda Pharmaceutical Company

Luncheon Seminar 2 — 12:05~12:55 Lecture Room 1 [12F Conference Hall]

LS-2 Accelerating Cell Line Development: Automated Clone Screening with Cydem VT

Abigail Lee
Field Applications Specialist, Beckman Coulter Life Sciences

Sponsor: Beckman Coulter Life Sciences

Technical Seminar 2 13:20~14:20 Lecture Room 1 [12F Conference Hall]

TS-3 13:20 **Advanced Chromatographic Solutions for Next-Generation Antibody Therapeutics**

Hiroshi Tomizawa

Bioscience Division, Tosoh Corporation, Japan

Sponsor: TOSOH CORPORATION

TS-4-1 13:40 **Poloxamer 188 Variant for Enhanced Formulation Stability of Biologics**

Juan Betancur[1], Nadine Löw[1], Tsubasa Sano[2], Felicitas Guth[1]

[1]BASF SE, Ludwigshafen am Rhein, Germany; [2]BASF Japan Ltd., Tokyo, 106-6121, Japan

Sponsor: BASF Japan Ltd.

TS-4-2 14:00 **Advancing Poloxamer 188 Chemistry: A Platform for Rational Design of Shear Protectants in Mammalian Cell Culture**

Fatemeh Dabbagh[1], Dominik-Hermann Schreiber[1], Sophia Ebert[2], Tsubasa Sano[1], Felicitas Guth[1]

[1]BASF SE, Ludwigshafen am Rhein, Germany; [2]BASF Japan Ltd., Tokyo, 106-6121, Japan

Sponsor: BASF Japan Ltd.

Poster odd-number 14:30-15:10 Poster Room [12F Conference Hall & 1202]

Poster even-number 15:10-15:50 Poster Room [12F Conference Hall & 1202]

Day 4 Program Dec. 11 (Thu)

Symposium 6: Current situation and perspective of rAAV manufacturing and quality control for gene therapy

9:00~11:00 Lecture Room 1 [12F Conference Hall]

Organizers: Susumu Uchiyama*(The University of Osaka)*, Yugo Hirai*(Chitose Laboratory Corp.)*

Recombinant adeno-associated virus (rAAV) has emerged as a leading platform for in vivo gene therapy, with several products already approved and more than 200 candidates currently in development. Nevertheless, significant challenges remain, particularly in the manufacturing and quality control of this complex and novel modality. This symposium will highlight recent advances in rAAV CMC, including innovations in cell platforms, analytics, and clinical translation, and provide a forum to discuss future perspectives in the field.

Opening remarks

9:00

S6-01 Current Situation and Perspective of rAAV Manufacturing and Quality Control for Gene Therapy

9:10

Biao Dong[1, 2]

[1]*Sichuan University State Key Laboratory of Biotherapy,*

[2]*West China Hospital National Clinical Research Center for Geriatrics*

S6-02 Encapsulation of nucleic acid impurities based on the mechanism of nucleic acid packaging into rAAV

9:45

Kazuhisa Uchida

Kobe Universuty

S6-03 HAT cells: A Viable Alternative for rAAV Manufacturing

10:10

Yugo Hirai

Chitose Laboratory Corp.

S6-04 Production of adeno-associated viral vectors by a novel human derived cell line HAT and comprehensive characterization of purified vectors

10:35

Susumu Uchiyama[1], Yasuo Tsunaka[1], Saki Shimojo[1], Karin Bando[1], Aoba Matsushita[2], Kimitoshi Takeda[2], Yuki Yamaguchi[1], Kazuaki Nakamura[3], Ryo Asahina[4], Yugo Hirai[4], Hirokazu Hirai[5], Tsukasa Ohmori[6], Mitsuko Fukuhara[2], Takeshi Omasa[1]

[1]*The University of Osaka,* [2]*U-Medico Inc,* [3]*Riken,* [4]*Chitose Laboratory Corporation,* [5]*Gunma University,* [6]*Jichi Medical University*

Poster odd-number

11:10-11:50 Poster Room [12F Conference Hall & 1202]

Poster even-number

11:50-12:30 Poster Room [12F Conference Hall & 1202]

Luncheon Seminar 3

12:40~13:30 Lecture Room 1 [12F Conference Hall]

LS-3 Next Generation CHO Host for High Producing Clones

Sadao Ozawa

Merck Limited, Tokyo, 106-0041, Japan

Sponsor: Merck Ltd.

Oral Session 1 13:40~15:40 Lecture Room 1 [12F Conference Hall]

Chairs: Kyoko Masumi*(Kobe University)*, Ryo Misaki*(The University of Osaka)*

O-01 13:40 Enhancing rAAV genome titer - transfection optimization using DoE approach

Yusuke Tomioka[1], Janice Tan[2]

[1]Merck Ltd.,, [2]Merck Pte Ltd.,

O-02 13:53 A versatile HEK293 cell culture medium enables various intensified AAV production processes

Jose Romero Sanchez[1], **Shan Gao**[1], Hamid Soleymani[1], Francisco Franco[1], Chandana Sharma[1], Katsuko Sato[1], Masafumi Nishino[1], Nozomu Tonoike[2], Omid Taghavian[2]

[1]FUJIFILM Biosciences, [2]FUJIFILM Corporation

O-03 14:06 Heat-Inducible Hepatic Cells in Hydrogel Microfibers for Liver Models and Drug Testing

Silas Habimana[1], Ian Paulo Calicdan Gigante [2], Nana Shirakigawa[1], Hiroyuki Kitano[1], Yoshinori Kawabe[1], Masamichi Kamihira[1, 2, 3]

[1]Dept. Chem. Eng., Fac. Eng., Kyushu Univ., Fukuoka, Japan,

[2]Grad. Sch. Syst. Life Sci., Kyushu Univ., Fukuoka, Japan,

[3]Corresponding Author: Tel.: +81-92-802-2743; Fax: +81-92-802-2793. E-mail: kamihira@chem-eng.kyushu-u.ac.jp

O-04 14:19 Photo-responsive Cell Anchoring Surfaces for Single-cell Cancer Cytotoxicity Assay of Immunocytes

Satoshi Yamaguchi, Shinya Yamahira

The University of Osaka

O-05 14:32 The Effect of All-Trans-Retinoic Acid on the Targeting of Senescent Cells to NK Cells

Rui Ono, Yuka Takeshita, Nozomu Eto

Graduate School of Agriculture, University of Miyazaki, Miyazaki, Japan

O-06 14:45 STREAMLINING BIOPROCESSES BY CONVERTING A DUAL-FEED INTO A SINGLE-FEED SYSTEM WITH PEPTIDES

Christina Jost[1], Tomislav Trescec[1], **Spandan Mishra**[2], Anne Benedikt[1], Stephan Brinkmann[1]

[1]Evonik Operations GmbH, [2]Evonik India Pvt. Ltd.

O-07 14:58 MACHINE LEARNING-DRIVEN CELL LINE SELECTION FOR HIGH-DENSITY PERFUSION CULTURE

Shuhei Katayama[1], Maiko Wakita[1], Keiichi Onodera[1], Ken Matsui[1], Tatsuya Matsuura[1], Yuta Murakami[1], Yuanzhong Li[1], John Raven[2], Leon Pybus[2], Shinichi Nakai[1]

[1]FUJIFILM Corporation, [2]FUJIFILM Biotechnologies

O-08 15:01 Mitigating Cell Retention Filter Fouling for 2000L High-Density Perfusion Culture

Naomichi Hikichi[1], Kosuke Taniguchi[1], Shunichi Yoshida[1], John Raven[2], Leon Pybus[2], Shinichi Nakai[1]

[1]FUJIFILM Corporation, [2]FUJIFILM Diosynth Biotechnologies Ltd., UK

O-09 15:14 Validation of Scale-Up Application for Real-Time Monitoring of CHO Cell Culture Process Using Raman Spectroscopy

Wataru Kobayashi, Ryuma Nagano, Yusaku Shimura, Tsuyoshi Yamaguchi

Kyowa Kirin Co., Ltd.

Oral Session 2 13:40~15:40 Lecture Room 2 [11F 1101+1102]

Chairs: Kosuke Nishi*(Ehime University)*, Masayoshi Tsukahara*(Kyoto University)*

O-10 13:40 Targeting Cancer Stem Cells In Colorectal Cancer Cell Spheroids Using Hydroxytyrosol, a Natural Phenolic Compound From Virgin Olive Oil

Ana Catarina Macedo[1, 2], Lucilia Pereira[3], Maricruz Mamani[4], Carolina Simó[4], Virginia Garcia-Canas[4], Cristina Albuquerque[3], Maria Rosário Bronze[1, 2, 5], **Teresa Serra**[1]

[1]*iBET- Instituto de Biologia Experimental e Tecnológica, Oeiras, Portugal,*

[2]*Instituto de Tecnologia Química e Biológica António Xavier, Universidade Nova de Lisboa (ITQB NOVA), Oeiras, Portugal,*

[3]*Instituto Português de Oncologia de Lisboa Francisco Gentil, E.P.E (IPOLFG, EPE), Lisboa, Portugal,*

[4]*Institute of Food Science Research (CIAL), Spanish National Research Council (CSIC), Madrid, Spain,*

[5]*Faculdade de Farmácia da Universidade de Lisboa, Lisboa, Portugal*

O-11 13:53 Transcriptomic Evidence of Black soybean Ethanolic Extract and 2-Aminobutyric Acid in Suppressing Neuroinflammation and Enhancing Synaptic Transmission

Sharmin Aktar[1], Kyoko Toda [3], Farhana Ferdousi[2, 4, 5], Shinya Takahashi[2, 4, 5], Hiroko Isoda[1, 2, 4, 5], Mari Maeda Yamamoto[3]

[1]*National Institute of Advanced Industrial Science and Technology(AIST),*

[2]*Tsukuba University, Graduate School of Life and Environmental Sciences,*

[3]*National Agriculture and Food Research Organization (NARO),*

[4]*Alliance for Research on the Mediterranean and North Africa (ARENA),*

[5]*Tsukuba Life Science Innovation (T-LSI) Program, University of Tsukuba, Japan*

O-12 14:06 Antidepressant-like effects of olive mill by-products, rich in oleacein through enhanced neurogenesis in a mouse model of tail suspension-induced depression

Kazunori Sasaki[1, 2], Morgane Carrara[3], Delphine Margout-Jantac[3], Hiroko Isoda[1, 2, 4]

[1]*Alliance for Research on the Mediterranean and North Africa (ARENA), University of Tsukuba, Tsukuba, Japan,*

[2]*AIST-University of Tsukuba Open Innovation Laboratory for Food and Medicinal Resource Engineering (FoodMed-OIL), AIST, Tsukuba, Japan,*

[3]*Qualisud, Université de Montpellier, Avignon Université, CIRAD, Institut Agro, IRD, Université de La Réunion, 34093 Montpellier, France,*

[4]*Faculty of Life and Environmental Sciences, University of Tsukuba, Tsukuba, Japan*

O-13 14:19 Isorhamnetin halts proliferation of pancreatic cancer-associated fibroblasts via cell cycle arrest

Munkhzul Ganbold[1], Pakavarin Louphrasitthiphol[2, 3], Takafumi Miyamoto[4, 5], Tatsuya Oda[2], Hiroko Isoda[1, 6]

[1]*Alliance for Research on the Mediterranean and North Africa (ARENA), University of Tsukuba, Tsukuba, Japan,*

[2]*Department of Gastrointestinal and Hepato-Biliary-Pancreatic Surgery, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan,*

[3]*Ludwig Institute for Cancer Research, Nuffield Department of Clinical Medicine, University of Oxford, Headington, Oxford, UK,*

[4]*Department of Internal Medicine (Endocrinology and Metabolism), Institute of Medicine, University of Tsukuba, Tsukuba, Japan,*

[5]*Transborder Medical Research Center, University of Tsukuba, Tsukuba, Japan,*

[6]*Institute of Life and Environmental Sciences, University of Tsukuba, Tsukuba, Japan*

O-14 14:32 **Plant-derived miRNA osa-miR172d-5p attenuated bleomycin-induced pulmonary fibrosis by targeting Tab1**

Motofumi Kumazoe, Fumiyo Ogawa, Ai Hikida, Yu Shimada, Ren Yoshitomi, Yoshinori Fujimura, Hirofumi Tachibana
Kyushu Univ

O-15 14:45 **Billion-Scale Production of Functional hiPSC-Derived Cardiomyocytes and Extracellular Vesicles in Bioreactors: Bridging Stem Cell Biology and Engineering**

Margarida Serra[1, 2], Pedro Vicente[1, 2], Lara Inocencio[1, 2], Ana Meliciano[1, 2], Joao Jacinto[1, 2], Catarina Freitas[1, 2], Miguel Fuzeta[1, 2], Marta H Costa[1, 2], Paula M Alves[1, 2]
[1]*iBET, Instituto de Biologia Experimental e Tecnologica,*
[2]*ITQB-NOVA, Instituto de Tecnologia Quimica e Biologica António Xavier, Universidade Nova de Lisboa*

O-16 14:58 **Development Of An In Vitro Potency Assay For Mesenchymal Stem Cell-Mediated Extracellular Matrix Remodeling Using High-Density Collagen-Coated Surface**

Shao Ying Tan[1], Mee-Hae Kim[1], Masahiro Kino-oka[1, 2]
[1]*Department of Biotechnology, Graduate School of Engineering, The University of Osaka,*
[2]*Research Base for Cell Manufacturability, The University of Osaka*

O-17 15:01 **Development Of An Evaluation Method For The Production Potential Of MSC-Derived Exosomes**

Ariunkhuslen Ganzorig[1], Mee-Hae Kim[1], Masahiro Kino-oka[1, 2]
[1]*Department of Biotechnology, Graduate School of Engineering, The University of Osaka,*
[2]*Research Base for Cell Manufacturability, The University of Osaka*

O-18 15:14 **Effect of Filling and Freezing Processes on Cell viability and Extracellular Matrix Remodeling Potential of Mesenchymal Stem Cells**

Ryoki Adachi[1], Mee-Hae Kim[1], Masahiro Kino-oka[1, 2]
[1]*Department of Biotechnology, Graduate School of Engineering, The University of Osaka,*
[2]*Research Base for Cell Manufacturability, The University of Osaka*

Award Ceremony / Closing remarks 15:50-16:00 Lecture Room 1 [12F Conference Hall]