THE 22nd ANNUAL MEETING
JSGCT2016
JAPAN SOCIETY OF GENE AND CELL THERAPY

Program & Abstracts

Date
July 28-30, 2016

Venue
TORANOMON HILLS FORUM
Mori Tower 5th Floor, 1-23-3 Toranomon,
Minato-ku, Tokyo 105-6305, Japan

TOKYO
PROGRAM
Presidential Lecture (E)  
Date: July 29, 2016, 11:40-12:00, Hall-1  
Chairperson: Yoshikatsu Eto

Toya Ohashi (The Jikei University School of Medicine)  
Current treatment and gene therapy for lysosomal storage diseases

JSGCT Chairman’s Lecture (E)  
Date: July 28, 2016, 14:00-14:30, Hall-1  
Chairperson: Jun Yoshida

Yasufumi Kaneda (Graduate School of Medicine, Osaka University, Chairman of JSGCT)  
Mission of JSGCT for gene therapy prosperity in future

President’s Special Program  
with AMED, Ministry of Health, Labour and Welfare (J)  
Date: July 29, 2016 11:00-11:40, Hall-1  
Chairperson: Toshiyoshi Fujiwara

Makoto Suematsu (Japan Agency for Medical Research and Development)  
AMED develops medical arts for patients with rare and undiagnosed diseases  
Chairperson: Shigetaka Asano

Kazuhiko Mori (Ministry of Health, Labour and Welfare)  
Current situation for encouraging realization of gene and cell therapy

Educational Lecture I (E)  
Date: July 28, 2016 14:30-15:10, Hall-1  
Chairperson: Toya Ohashi

Yoshikatsu Eto (Advanced Clinical Research Center, Institute of Neurological Disorders, Kanagawa)  
Nobel treatment strategies including gene therapy for genetic neurological disorders

Educational Lecture II (E)  
Date: July 28, 2016 15:10-15:50, Hall-1  
Chairpersons: Takashi Shimada

Patrick Aubourg (INSERM, France)  
Gene therapy for X-linked adrenoleukodystrophy and metachromatic leukodystrophy

Educational Lecture III (E)  
Date: July 29, 2016 13:00-13:40, Hall-1  
Chairpersons: Yutaka Hanazono & Izumu Saito

Kohei Miyazono (Graduate School of Medicine, The University of Tokyo)  
TGF-β signaling: Mechanisms of action and clinical application

Educational Lecture IV (E)  
Date: July 29, 2016 13:00-13:40, Hall-2  
Chairpersons: Hiroshi Kobayashi & Eriko Uchida

Naomichi Matsumoto (Yokohama City University Graduate School of Medicine)  
Rare variants in human diseases

Special Lecture (E)  
Date: July 30 2016, 11:30-12:00, Hall-1  
Chairperson: Takashi Okada

Daniel Chung (Spark Therapeutics, Inc.)  
Gene therapy for RPE65-mediated inherited retinal disease
Main Symposium (E)  
Date: July 29, 2016, 9:50-11:00, Hall-1  
Chairpersons: Yasufumi Kaneda & Yasutomo Nasu

MS-1. Cynthia E. Dunbar (NIH, ASGCT President)  
Investigating stem cell biology and therapeutic potential in the rhesus macaque model

MS-2. Robin R. Ali (UCL Institute of Ophthalmology, ESGCT President)  
Improved daylight vision in mice following gene therapy to increase the speed of rod photoreceptors

International Symposium (E)  
Date: July 29, 2016 13:40-15:30, Hall-1  
Chairpersons: Noriyuki Kasahara & Masato Yamamoto

IS-1. Jeffrey Medin (Medical College of Wisconsin, USA)  
Modulation of the local tumor micro-environment by LV-mediated expression of IL-12 in primary AML cells

IS-2. Harald Petry (UniQure, The Netherlands)  
Establishing gene therapy in the clinic: From bench to bedside

IS-3. Michael C. Holmes (Sangamo BioSciences, USA)  
Genome editing in primary human cells and organs: Towards the goal of engineering genetic cures

IS-4. Douglas J. Jolly (Tocagen Inc., USA)  
Ascending dose trials of a retroviral replicating vector (Toca 511) in patients with recurrent high-grade glioma: clinical update, molecular analyses, and proposed mechanism of action

Symposium I (E)  
ICFHGTGD JSGCT Joint Symposium  
-Genetic Diseases-  
*ICFHGTGD: International Collaborative Forum of Human Gene Therapy for Genetic Disease  
Date: July 28, 2016, 16:00-18:10, Hall-1  
Chairpersons: Torayuki Okuyama & Masafumi Onodera

S1-1. Wuh-Liang Hwu (National Taiwan University Hospital)  
Gene therapy for AADC deficiency: toward a standard therapy

S1-2. Hiroshi Kobayashi (The Jikei University School of Medicine)  
Ex-vivo gene therapy, as a promising approach for the treatment of central nervous system of Mucopolysaccharidosis type II murine model

S1-3. Toru Uchiyama (National Center for Child Health and Development)  
Hematopoietic stem cell gene therapy for Wiskott-Aldrich syndrome

S1-4. Takanori Yamagata (Jichi Medical University)  
Development and clinical application of gene therapy using AAV for child neurological diseases

S1-5. Yasuhiro Ikeda (Graduate School of Medical Sciences, Kyushu University)  
Gene therapy for inherited retinal degenerative diseases

Symposium II (J)  
-Regulatory Science-  
Date: July 29, 2016, 8:30-9:50, Hall-1  
Chairpersons: Akihiro Kume & Teruhide Yamaguchi
S2-1. Yoshiro Meguro (Japan Agency for Medical Research and Development)
AMED programs to promote innovative drug development

S2-2. Jun Matsumoto (Japan Agency for Medical Research and Development)
AMED support for medical R&D projects

S2-3. Daisaku Sato (Pharmaceuticals and Medical Devices Agency)
Regulatory perspective on cell and gene therapy products

S2-4. Hisashi Koike (Pharmaceuticals and Medical Devices Agency)
Introduction of pharmaceutical affairs consultation on R&D strategy and its effective utilization

**Symposium III (E)**
- Genome Editing -
Date: July 29, 2016, 13:40-14:40, Hall-2
Chairpersons: Yumi Kanegae & Konosuke Mitani

S3-1. Osamu Nureki (Graduate School of Science, The University of Tokyo)
Structure-based development of genome-editing tool, CRISPR-Cas9 towards medical applications

S3-2. Akitsu Hotta (Center for iPS cell Research & Application (CiRA), Kyoto University)
Genome editing gene therapy for Duchenne Muscular Dystrophy

S3-3. Konosuke Mitani (Saitama Medical University)
Recent progress and remaining challenges in therapeutic genome editing

**Symposium IV (E)**
- Cancer -
Date: July 29, 2016, 15:40-17:40, Hall-1
Chairpersons: Kenzaburo Tani & Tomoki Todo

S4-1. Toshiyoshi Fujiwara (Okayama University Graduate School of Medicine)
Next-generation telomelysin: multifunctional telomerase-specific oncolytic adenovirus armed with the wild-type p53 tumor suppressor gene

S4-2. Yasushi Ino (The Institute of Medical Science, The University of Tokyo)
Clinical trials of oncolytic HSV-1 G47Δ for patients with glioblastoma

S4-3. Kerry Fisher (PsiOxus Therapeutics Limited, United Kingdom)
Systemic delivery of Enadenotucirev, a group B oncolytic adenovirus for the treatment of cancer

S4-4. Swami Murugappan (Amgen Inc.) Kenzaburo Tani (The Institute of Medical Science, The University of Tokyo)
Talimogene laherparepvec: Harnessing herpes virus for the treatment of advanced melanoma

S4-5. Kenzaburo Tani (The Institute of Medical Science, The University of Tokyo)
Development of new oncolytic virotherapies for malignancies

**Symposium V (E)**
- Cardiovascular Diseases -
Date: July 30, 2016, 8:30-10:30, Hall-2
Chairpersons: Ryuichi Morishita & Yoshikazu Yonemitsu

S5-1. Toyoaki Murohara (Nagoya University Graduate School of Medicine)
Wnt11 gene therapy with adeno-associated virus 9 improves recovery from myocardial infarction

S5-2. Keiichi Fukuda (Keio University School of Medicine)
Clinical application of human iPS cells for the treatment of patients with severe congestive heart failure
Symposium VI (E)
JSRM-JSGCT Joint Symposium
-Cell Therapy-

S5-3. Yoshikazu Yonemitsu (Graduate School of Medical Sciences, Kyushu University)
Current status of clinical development of human FGF-2-expressing recombinant Sendai virus vector (DVC1-0101) to treat peripheral arterial disease

S5-4. Yukihiro Saito (Asahikawa Medical University)
Gene therapy for lymphedema

S5-5. Hiroshi Koriyama (Graduate School of Medicine, Osaka University)
The development of IL-17A vaccine

S5-6. Jun-ichi Suzuki (Department of Advanced Clinical Science and Therapeutics, The University of Tokyo)
Pivotal roles of inflammatory factors in vascular disease and its specific regulation

Symposium VII (E)
JCA-JSGCT Joint Symposium
-Cancer Immunotherapy-

S6-1. Osamu Honmou (Sapporo Medical University)
Intravenous transplantation of autologous mesenchymal stem cells derived from bone marrow into stroke patients

S6-2. Taro Matsumoto (Nihon University School of Medicine)
Dedifferentiated fat cells as a new cell source for therapeutic angiogenesis and regenerative medicine

S6-3. Tokiko Nagamura (The Institute of Medical Science, The University of Tokyo)
Umbilical cord is a rich source of mesenchymal stromal cells for cell therapies

Symposium VIII (E)
-Neurological and Muscle Diseases-

S7-1. Koji Tamada (Yamaguchi University Graduate School of Medicine)
New era of cancer immunotherapy begins: A role of gene-modified cell therapy

S7-2. Hiroshi Fujiwara (Ehime University Graduate School of Medicine)
Clinical study of novel adoptive immunotherapy using gene-modified autologous lymphocytes to express WT1 specific T-cell receptor against myeloid leukemia

S7-3. Ken Omine (Jichi Medical University)
Clinical development of CD19-CAR therapy in patients with B-cell malignancy

S7-4. Yutaka Kawakami (Keio University School of Medicine)
Future perspectives of cancer immunotherapy: Towards personalized combination cancer immunotherapy
S8-1. Krystof Bankewicz (University of California)
Surgical coverage of the putamen in Parkinson’s disease with AAV2-AADC using MRI-guided convective delivery

S8-2. Hitoshi Okazawa (Tokyo Medical and Dental University)
Gene therapy to conquer spinocerebellar ataxia

S8-3. Shin Kwak (Graduate School of Medicine, The University of Tokyo)
Targeting therapy for sporadic ALS

S8-4. Masayuki Nakamori (Graduate School of Medicine, Osaka University)
Antisense oligonucleotide therapy for neurological and neuromuscular disorders

Technical Seminar (J)
-AAV, Lentivirus Vector-

TS-1. Takashi Okada (Nippon Medical School)
Attractive characteristics of self-complementary AAV vectors and improved methods for efficient production

TS-2. Hiroyuki Miyoshi (Keio University School of Medicine)
Clinical use of lentiviral vectors

TS-3. Yumi Kanegae (The Jikei University School of Medicine)
The application of genome editing for gene therapy

The 2nd International Symposium of the Asia-Pacific Gene Therapy Consortium (E)
(*This Symposium is free of charge to attend but limited to those who have paid their JSGCT2016 Annual Meeting's registration fee.)

AP-1. Ian E. Alexander (Children’s Medical Research Institute and the Sydney Children’s Hospitals Network, Australia)
AAV vectors as tools for liver-targeted gene therapy: efficacy and safety

AP-2. Wenlin Huang (Sun Yat-Sen University Cancer Center, China)
Multicenter randomized phase II/III clinical trial of a recombinant human endostatin adenovirus for cancer gene therapy

AP-3. Won Jong Kim (Pohang University of Science and Technology (POSTECH), Korea)
Smart nanoparticles for drug, gene and gas delivery

AP-4. Shin-ichi Muramatsu (Jichi Medical University, Japan)
Gene therapy for central nervous system disorders

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7th Takara Bio Award Lecture
Date: July 29, 2016, 11:45-12:00, Hall-1
Chairperson: Yasufumi Kaneda

Mitsuhiro Machitani (Graduate School of Pharmaceutical Sciences, Osaka University)
NF-κB promotes leaky expression of adenovirus genes in a replication-incompetent adenovirus vector

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Plenary Session (E) (Abstracts PS-1~PS-3)

Date: July 28, 2016, 11:00-11:45, Hall-1
Chairpersons: Yoshiro Niitsu & Toshihiko Wakabayashi

PS-1. Improved motor and cognitive function of Aromatic L-Amino acid Decarboxylase (AADC) deficient patients following gene therapy using the AAV2 vector
Kajima K., Miyauchi A., Nakajima T., Asari-Ono S., Saga Y., Mizukami H., Sato T., Muramatsu S., Osaka H., Yamagata T.

PS-2. INVOSSA™ (TissueGene-C) in patients with osteoarthritis: A clinical study of phase III
Cho J. J., Kim T. W., Min S. J., Suk K., Lee B.

PS-3. Systemic treatment of mesothelin-targeted oncolytic adenovirus eliminates pancreatic cancer
Sato-Dahlman M., Miura Y., Hajeri P., Jacobsen K., Davydova J., Yamamoto M.

Day 1: July 28, 2016

Oral Session I
Neurologic Diseases-1 (Abstracts OR-4~OR-7)

14:30-15:10, Hall-2
Chairpersons: Yasuhiro Ikeda & Shin’ichi Takeda

OR-4. Cell therapeutic approach using dental pulp stromal cells for Duchenne muscular dystrophy

OR-5. Systemic administration of rAAV9-microdystrophin with MSCs pre-treatment improves transgene expression and phenotype in CXMD1

OR-6. AAV-mediated efficient transduction of the nonhuman primate retina by surgical internal limiting membrane (ILM) peeling

OR-7. An approach to compare multiple adeno-associated virus (AAV) capsids side-by-side in a single eye following intravitreal injection

Oral Session II
Neurologic Diseases-2 (Abstracts OR-8~OR-10)

15:10-15:40, Hall-2
Chairpersons: Shoji Tsuji & Takanori Yamagata


OR-9. Development of LNA Gapmer oligonucleotide based therapy for FTD/ALS caused by the C9ORF72 repeat expansion
Aoki Y., Manzano R., Takeda S., Ohbayashi N., Fukuda M., Talbot K., Wood M. J. A.

OR-10. Necdin prevents dopaminergic neurodegeneration in experimental Parkinson disease
Mochizuki H., Yasuda T., Yoshikawa K.
Oral Session III
Cancer-1 (Abstracts OR-11~OR-15)

Chairpersons: Yasushi Ino & Takafumi Nakamura

16:00-16:50, Hall-2

OR-11. Oncolytic herpes simplex virus type 1 G47Δ is efficacious in mouse colon cancer models and induces immunogenic cell death
Abe S., Ino Y., Fukuhara H., Iwai M., Watanabe T., Todo T.

OR-12. Generation and evaluation of an oncolytic herpes simplex virus expressing an antibody as a therapeutic molecule
Ito H., Ino Y., Fukuhara H., Iwai M., Todo T.

OR-13. Retroviral replicating vector-mediated gene therapy induced anti-tumor immunity in an experimental glioma model

Tsuda H., Furui S., Chono H., Tanaka M., Ikeda H., Shiku H., Mineno J.

OR-15. Novel recombinant coxsackievirus B3 infection shows potent oncolytic activity against human non-small cell lung cancer and triple-negative breast cancer
Sagara M., Miyamoto S., Takishima Y., Shimizu H., Nakanishi Y., Tani K.

Oral Session IV
Cancer-2 (Abstract OR-16-OR-19)

Chairpersons: Hideki Kasuya & Toshiro Shirakawa

16:50-17:30, Hall-2

OR-16. Inhibition of peritoneal dissemination of scirrhous gastric cancer by oncolytic adenovirus-mediated activation of tumor suppressor p53 and suppression of oncogenic receptor tyrosine kinases

OR-17. Impairment of KRAS-driven pancreatic cancer growth and invasion by tumor-specific oncolytic adenoviruses

Nakagawa S., Serada S., Ueda Y., Yoshino K., Fujimoto M., Kimura T., Naka T.

OR-19. CXCL-2 gene-loaded HVJ-E suppressed mouse melanoma by increasing T-cell-mediated anti-tumor immunity through the accumulation of anti-tumorigenic neutrophils in tumor microenvironment.
Chang C. Y., Tai J. A., Kaneda Y.

Oral Session V
Cancer-3 (Abstracts OR-20~OR-23)

Chairpersons: Junichi Mineno & Yozo Nakazawa

17:30-18:10, Hall-2

OR-20. CD269-targeted CAR-modified T cells showed promising therapeutic efficacy in an orthotropic mouse model of multiple myeloma.
Uchibori R., Teruya T., Ohmine K., Urabe M., Saga Y., Mizukami H., Mineno J., Ozawa K.
OR-21. Enhanced expression of anti-CD19 chimeric antigen receptor in piggyBac-modified engineered T cells

OR-22. Intratumoral IFN-α gene transfer reduces trafficking of Tregs into tumor by inhibition of CCL17 expression in tumors
Shibasaki C., Hashimoto H., Ueda R., Narumi K., Aoki K.

OR-23. Development of the novel oral cancer vaccine using Bifidobacterium longum displaying Wilms’ tumor 1 protein

Day 2: July 29, 2016
Oral Session VI
Vector-1 (Abstracts OR-24–OR-29)

OR-24. One-step nuclease-free generation of gene-repaired human iPS cells from IL2RG-defective fibroblasts
Ohta N., Iwanaga Y., Ohtaka M., Nishimura K., Nakanishi M., Mitani K.

OR-25. Simple and effective ultracentrifugation-free large-scale purification of recombinant adeno-associated virus serotype 9 (rAAV9)

OR-26. Assembly-activating protein is not required for the production of infectious AAV5 virions

OR-27. The 16 amino acid stretch of N-terminal region in AAV9 capsid is essential for persistence in blood circulation
Adachi K., Nakai H.

OR-28. The systemic delivery of CXCR4-targeted conditionally replicative adenovirus with fiber and hexon modifications in pancreatic cancer
Huang J. L., LaRocca C., Jacobsen K., Jensen E. H., Kaliberov S., Curiel D. T., Davydova J., Yamamoto M.

OR-29. Reovirus-mediated efficient killing of mouse cancer-associated fibroblasts
Sakurai F., Kaminade T., Tachibana M., Mizuguchi H.

Oral Session VII
Regenerative Medicine (Abstracts OR-30–OR-34)

OR-30. The effect of autologous adipose-derived mesenchymal stem cell transplantation on vascular calcification in rats with adenine-induced kidney disease
Yokote S., Yamanaka S., Tajiri S., Matsumoto K., Yokoo T.

OR-31. Alveolar bone regeneration therapy by BMP-2/7 double genes expression cassette vector with in vivo electroporation
Kawai M., Ohura K.

OR-32. Middle ear mucosal regeneration by nasal mucosal epithelial cell sheets transplantation
Yamamoto K., Morino T., Hama T., Yaguchi Y., Kojima H.
OR-33. Conditionally replicating adenovirus specifically eliminates pluripotent stem cell-derived tumorigenic cells without adverse effects to differentiated cardiomyocytes
Mitsui K., Ide K., Kosai K.

OR-34. Robust production of high purity endothelial cells from various human pluripotent stem cells
Yamamoto Y., Enoki T., Yamamizu K., Yamashita J. K., Mineno J.

Oral Session VIII
Cancer-4 (Abstracts OR-35~OR-39)
11:00-11:50, Hall-2
Chairpersons: Kazunori Aoki & Kenichiro Kosai

OR-35. Monitoring and imaging tumor progression and tracking drug response in a preclinical mouse model
Huang P., Xu N., Takenaka F., Matsuura E., Watanabe M., Kumon H., Liu C., Nasu Y.

OR-36. Reovirus reduces the immunosuppressive activity of myeloid-derived suppressor cells via TLR3-dependent signaling pathway in tumor-bearing mice
Sakurai F., Katayama Y., Oya Y., Terasawa Y., Tachibana M., Kobiyama K., Ishii K., Akira S., Mizuguchi H.

OR-37. Upregulated IncRNA-UCA1 enhances therapeutic effect of oncolytic vaccinia virus in paclitaxel resistant ovarian cancer

OR-38. Peritoneal dissemination requires an Sp1-Dependent CXCR4/CXCL12 signaling axis and extracellular matrix–directed spheroid formation
Harada Y., Morodomi Y., Yonemitsu Y.

OR-39. A novel system to efficiently construct lentiviral vectors that identify and eliminate tumorigenic cells in pluripotent stem cells
Ide K., Mitsui K., Irie R., Matsushita Y., Ijichi N., Kosai K.

Oral Session IX
Vector-2 (Abstracts OR-40~OR-45)
14:40-15:40, Hall-2
Chairpersons: Saki Kondo & Masashi Urabe

OR-40. Oncolytic adenovirus expressing IFN-α works synergistically with chemoradiation
Salzwedel A., LaRocca C., Ryvlin J., Han J., Davydova J., Yamamoto M.

OR-41. CD133-targeted oncolytic adenovirus exhibits anti-tumor effect by attacking colon cancer stem cells
Sato-Dahlman M., Miura Y., Huang J. L., Davydova J., Yamamoto M.

OR-42. A super gene expression system enhances the anti-glioma effects of adenovirus-mediated REIC/Dkk-3 gene therapy

OR-43. Potent antitumor efficacy of oncolytic HSV-1 expressing interleukin 12 in cisplatin-resistant testicular cancer
Kakutani S., Fukuhara H., Taguchi S., Takeshima Y., Homma Y., Ino Y., Todo T.

OR-44. Development of platelet vector incorporating viral particles and anticancer cytokine for targeting tumor specific microenvironment
Nishikawa T., Li Y. T., Kaneda Y.
OR-45. Preclinical study for tumor-targeted and armed oncolytic vaccinia virus for systemic cancer virotherapy

Oral Session X
Genetic Diseases-1 (Abstracts OR-46~OR-50)
15:50-16:40, Hall-2
Chairpersons: Koichi Miyake & Mahito Nakanishi

OR-46. Generation of high-performance pseudovirion for cancer immune therapy
Saga K., Kaneda Y.

OR-47. AAV-mediated gene therapy ameliorates autophagy dysfunction and neuropathy in CNS of globoid cell leukodystrophy mice
Lin D. S., Ho C. S., Liu H. L., Chiang M. F.

OR-48. Lentiviral mediated gene therapy & Zinc Finger Nuclease mediated gene editing for Krabbe disease

OR-49. Ex vivo lentiviral gene therapy outperforms other conventional therapeutic strategies in murine model of mucopolysaccharidosis type II

OR-50. Ex vivo genome editing therapy for Fabry disease
Kami D., Sakuma T., Yamamoto T., Gojo S.

Oral Session XI
Genetic Diseases-2 (Abstracts OR-51~OR-56)
16:40-17:40, Hall-2
Chairpersons: Toshinao Kawai & Hiroyuki Nunoi

OR-51. Assessment of the alveolar bone and tooth in lethal hypophosphatasia mice treated by rAAV8-TNALP-D10

OR-52. Therapeutic effects of scAAV8-mediated high dose expression of bone targeted alkaline phosphatase on the lethal hypophosphatasia mice

OR-53. Follow-up lentiviral integration sites analysis in ADA-SCID clinical gene therapy

OR-54. Single cell-based vector tracing in the patients treated with stem cell gene therapy
Takahashi S., Yuka Igarashi, Uchiyama T., Watanabe N., Otsu M., Ariga T., Onodera M.

OR-55. Neonatal gene therapy for hemophilia B by a novel adenovirus vector showing reduction in the leaky expression of viral genes.
Iizuka S., Sakurai F., Tachibana M., Ohashi K., Mizuguchi H.

OR-56. Effective microdystrophin expression in non-human primate muscle with AAV type 8 vectors under immune suppression
Ishii A., Okada H., Hayashita-Kinoh H., Shin J. H., Okada T., Takeda S.
Poster Sessions

Poster Session I
Acquired Diseases (Abstracts: PO-57–PO-62)

Date: July 29, 2016, 17:40-18:10, Poster & Exhibition Hall
Chairperson: Hiroshi Tazawa

PO-57. Therapeutic effect of liver-targeted hydrodynamic delivery of MMP13 gene on liver fibrosis
Kamimura K., Abe H., Kobayashi Y., Yokoo T., Ohotsuka M., Miura H., Yamagiwa S., Terai S.

PO-58. Improvement of the efficiency in CRISPR/Cas9 system against Hepatitis B virus using adenovirus vector
Kondo S., Maekawa A., Suzuki M., Kanegae Y.

PO-59. Prevention of airway inflammation by simultaneous inhibition of NFκB and STST6 using chimeric decoy oligonucleotides in a mouse model of asthma
Miyake T., Miyake T., Hamada H., Morishita R.

PO-60. Study of erythroblastic-associated gene transduction by modified adenovirus vector for treatment of diabetes mellitus
Shimizu K., Okamoto M., Nishinaka T., Sakurai F., Mizuguchi H., Tomita K., Terada T.

PO-61. Knockdown of toll like receptor 4 signaling pathway ameliorates graft rejection in a mouse model of allograft transplantation
Hsieh J. L., Shen P. C., Chen S. Y.

PO-62. The development of candidate vaccine against MERS-CoV.
Koriyama H., Saito Y., Nakagami H., Morishita R.

Poster Session II
Cancer-1 (Abstracts: PO-63–PO-68)

Date: July 29, 2016, 17:40-18:10, Poster & Exhibition Hall
Chairperson: Yasushi Soda

PO-63. Cytoplasmic calcium increase via fusion with inactivated Sendai virus induces apoptosis in human multiple myeloma cells by downregulation of c-Myc oncogene
Jiang Y., Saga K., Kaneda Y.

PO-64. A therapeutic potential of a third generation oncolytic HSV-1 G47Δ for biliary tract cancer with peritoneal dissemination
Tateno Y., Ino Y., Iwai M., Shinozaki M., Todo T.

PO-65. The efficacy and safety of oncolytic HSV-1 (G47Δ) in mouse orthotopic esophageal cancer models
Yajima S., Ino Y., Fukuhara H., Iwai M., Seto Y., Todo T.

PO-66. Antitumor effect of oncolytic herpes simplex virus G47Δ in human head and neck cancers
Nagatomo T., Ino Y., Iwai M., Nishino H., Todo T.

PO-67. Antitumor efficacy of hTERT promoter regulated oncolytic herpes simplex viruses for human gastric cancer
Nakamori M., Kato T., Matsumura S., Tsuji T., Fukuhara H., Ino Y., Todo T., Yamaue H.

PO-68. RAMBO (rapid antiangiogenesis mediated by oncolytic virus) decreased bevacizumab-induced glioma cell invasion
Tomita Y., Kurozumi K., Shimizu T., Oka T., Ohtani Y., Ishida J., Kaur B., Ichikawa T., Date I.
Poster Session III
Cancer-2 (Abstracts: PO-69~PO-74)

Date: July 29, 2016, 17:40-18:10, Poster & Exhibition Hall
Chairperson: Hiroshi Fukuhara

PO-69. Chimeric antigen receptor T cells found to boost survival in mice with brain tumors

PO-70. Ligand-based chimeric antigen receptor-modified T cells targeting CD116 for the treatment of acute myeloid leukemia
Nakano S., Morita D., Matsuda K., Ohnita H., Hongo K., Koike K., Nakazawa Y.

PO-71. Manufacture of chimeric antigen receptor (CAR) gene transduced T cells for clinical trials
Inoue N., Oshikawa T., Tanaka Y., Tadai Y., Tomura D., Ideno M., Nukaya I., Mineno J., Takesako K.

PO-72. Development of measuring in vivo cell kinetics of retrovirus-mediated gene engineered T cells in patients who received the T cell transfer
Tadai Y., Tanabe M., Tomura D., Takayama M., Kageyama S., Kato H., Shiku H., Takesako K., Mineno J.

PO-73. Genetically-engineered multilineage-differentiating stress-enduring (Muse) cells as cellular assassins against malignant gliomas
Namba H., Yamasaki T., Wakao S., Dezawa M.

PO-74. Multilineage-differentiating stress-enduring (Muse) cells migrate a long distance to the glioma in the mouse brain
Yamasaki T., Wakao S., Dezawa M., Namba H.

Poster Session IV
Cancer-3 (Abstracts: PO-75~PO-81)

Date: July 29, 2016, 17:40-18:15, Poster & Exhibition Hall
Chairperson: Yoshinobu Manome

PO-75. Prodrug activator gene therapy mediated by retroviral replicating vector (RRV) for pancreatic ductal adenocarcinoma

PO-76. A tailor-made virotherapy with replicating retroviral replicating vectors on the basis of the cellular receptor expression
Kubo S., Mawatari-Furukawa Y., Sakagami R., Kasahara N.

PO-77. Novel polymer-coated oncolytic measles virus overcomes immune suppression and induces robust antitumor activity

Ogata H., Yasunari K., Inoue H., Miyamoto S., Takishima Y., Nakanishi Y., Tani K.

PO-79. A novel system strongly enhances hTERT promoter-dependent cancer-specific gene expression
Sadahira T., Watanabe M., Sakaguchi M., Ueki H., Kinoshita R., Nasu Y.

PO-80. Impact of Adenoviral Death Protein on sodium iodide symporter (NIS)-based iodine therapy and imaging for pancreatic cancer
Koodie L., Kawakami E., Eidenschink B., Sell J., LaRocca C., Jacobsen K., Ryvlin J., Tolosa E., Maxon D., Zapico M. F., Davydova J.
PO-81. Virus-guided fluorescent imaging of pancreatic cancer cells in the peritoneal cavity for an insight into roles of tumor-associated macrophage

Poster Session V
Cancer-4 (Abstracts: PO-82~PO-87)

Date: July 29, 2016, 17:40-18:10, Poster & Exhibition Hall
Chairperson: Yuji Heike

PO-82. Development and preclinical evaluation of a novel RNA trans-splicing molecule for cancer gene therapy targeted to cancer-type organic anion transporting polypeptide 1B3

PO-83. Gene expression analysis of bevacizumab-induced glioma invasion
Shimizu T.

PO-84. Antiproliferative effect of gene therapy with SOCS-1 in esophageal squamous cell carcinoma

PO-85. Ex vivo expansion of human mesenchymal stem cells in combination with defined serum-free media and RetroNectin® for clinical use.
Tahara K., Yamaguchi S., Yamamoto F., Togashi K., Ideno M., Nukaya I., Takeda T., Yamagishi H., Mineno J.

PO-86. Role of P53 during T lymphopoiesis from human pluripotent stem cells
Kohara H., Jiyuan L., Miyamoto S., Nagai Y., Marumoto T., Tani K.

PO-87. MDM2 and MDM4 inhibitors in combination with adenoviruses up-regulating p53 produce synergistic anti-tumor effects on mesothelioma through augmenting apoptotic processes
Tagawa M., Kozono T., Qin Y., Ning X. R., Morinaga T., Kubo S., Shingyoji M., Sekine I., Tada Y., Tatsumi K., Shimada H., Hiroshima K.

Poster Session VI
Cancer-5 (Abstracts: PO-88~PO-93)

Date: July 29, 2016, 17:40-18:10, Poster & Exhibition Hall
Chairperson: Toshihiko Okazaki

PO-88. Inhibition of hTERT-positive neuroblastoma malignant phenotype by hTERT-driven oncolytic adenovirus-mediated tumor suppressor p53 transactivation and oncogenic MYCN suppression.
Tanimoto T., Tazawa H., Koujima T., Kuwada K., Nosho H., Oyama T., Urata Y., Kagawa S., Noda T., Fujiwara T.

PO-89. Evaluating the effect of 5FU on oncolytic adenoviral replication
Sell J., Oliviera A., Yamamoto M., Davydova J.

PO-90. Combination therapy of squamous cell carcinoma mouse models with PD-L1 immune checkpoint inhibitor and oncolytic herpes simplex virus HF10

PO-91. Systemic delivery strategy of oncolytic herpes simplex virus HF10 adsorbed on antigen-specific lymphocytes
**Poster Session VII**

**Genetic and Neurological Diseases (Abstracts: PO-94~PO-99)**

**Date:** July 29, 2016, 17:40-18:10, Poster & Exhibition Hall
**Chairperson:** Makoto Migita

**PO-94.** Treatment for Fabry peripheral neuropathy with adeno-associated virus vector in murine Fabry disease model

Higuchi T., Shimada Y., Kobayashi H., Ohashi T.

**PO-95.** Effects of transplantation of human LCAT-secreting adipocytes on lipid metabolism in lcat deficient mice crossed with human apoA-I transgenic mice


**PO-96.** Novel ex vivo gene manipulation technology of mature adipocytes for sustained protein replacement therapy of variety of intractable diseases


**PO-97.** hnRNP A1 and A2 are potential targeted proteins for regulatory increasing of SMN synthesis in Spinal Muscular Atrophy.

Kashima T., Agawa-Ohta M., Kanegae Y., Yamada H.

**PO-98.** Generation of animal models of spinocerebellar ataxia via AAV9 vector-mediated gene transfer

Konno A., Matsuzaki Y., Hirai H.

**PO-99.** Neuroprotective effects of intravenous administration of dental pulp stem cells after ischemic-reperfusion injury


**Poster Session VIII**

**Vector (Abstracts: PO-100~PO-106)**

**Date:** July 29, 2016, 17:40-18:15, Poster & Exhibition Hall
**Chairperson:** Fuminori Sakurai

**PO-100.** Generation of gene knock-in marmosets using CRISPR/Cas9 system

Yoshida T., Kishi N., Sasaki E., Okano H.

**PO-101.** Development of in vitro and in vivo evaluation systems for novel non-coding RNA, SINEUP, to enhance translation level of target genes as a nucleic acid medicine


**PO-102.** Type I interferons impede short-hairpin RNA-mediated RNA interference via inhibition of dicer-mediated processing to small interfering RNA.

Machitani M., Sakurai F., Wakabayashi K., Tachibana M., Mizuguchi H.
PO-103. ssAAV vectors are able to pass through the BBB as well as scAAV
Miyake N., Miyake K., Yamamoto M., Shimada T., Okada T.

PO-104. Feasibility of large-scale rAAV production from suspension HEK293 cell line using flow electroporation system
Okada H., Tomono T., Adachi K., Hirai Y., Okada T.

PO-105. Stability comparison of recombinant serotype 2 adeno-associated virus vectors with wild-type viruses under different conditions relevant to gene therapy trials
Huang S., Kawano Y., Chono H., Okada T., Mineno J.

PO-106. Construction of One-stop GMP manufacturing facility
Day I

Corporate Seminar-I
(SANOFI K.K.)
Date: July 28, 2016, 12:00-13:00, Hall-1
Chairperson: Yoshikatsu Eto
(Advanced Clinical Research Center, Institute of Neurological Disorders)
Seng H. Cheng (SANOFI K.K.)
Emerging Therapeutic Concepts for Gaucher and Related Disease

Corporate Seminar-II
(BioReliance)
Date: July 28, 2016, 12:00-13:00, Hall-2
Chairperson: Sadao Ozawa
(BioReliance)
Susan Livingston (BioReliance)
Hidenori Meiseki (BioReliance)
Preparing for GMP manufacturing of Cell and Gene therapy clinical products - guidance and advice from manufacturing experts

Corporate Seminar-III
(CellSeed Inc.)
Date: July 28, 2016, 12:00-13:00, Hall-3
Chairperson: Katsumi Katayama
(CellSeed Inc.)
Nobuo Kanai (Tokyo Women's Medical University)
Hiromi Kojima (The Jikei University School of Medicine)
Moving forward toward the clinical use of cell-sheet regenerative medicine

Evening Seminar
(Daicel Corporation)
Date: July 28, 2016, 18:10-18:40, Hall-2
Chairperson: Yasufumi Kaneda
(Graduate School of Medicine, Osaka University)
Hironori Nakagami (Graduate School of Medicine, Osaka University)
Novel DNA vaccination by the needle-free injection system
Day II

Corporate Seminar-IV
(TAKARA BIO INC.)

Date: July 29, 2016, 12:00-13:00, Hall-1
Chairperson: Keiya Ozawa
(The Institute of Medical Science, The University of Tokyo)

Robert Hans Ingemar Andtbacka (Huntsman Cancer Institute, University of Utah)
Cutting edge of oncolytic virus immunotherapy

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Corporate Seminar-V
(Miltenyi Biotec)

Date: July 29, 2016, 12:00-13:00, Hall-2
Chairperson: Yoshikazu Yonemitsu
(Kyushu University)

Katharina Winnemöller (Miltenyi Biotec GmbH)
Cell therapy manufacturing - making the future now MACS technology for CAR-T cells

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Corporate Seminar-VI
(Sumitomo Dainippon Pharma Co., Ltd.)

Date: July 29, 2016, 12:00-13:00, Hall-3
Chairperson: Hiroyuki Ida
(The Jikei University School of Medicine)

Jeffrey A. Medin (Medical College of Wisconsin, USA)
Lentivirus-mediated gene therapy for Fabry Disease

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Day III

Corporate Seminar-VII
(AnGes MG, Inc.)

Date: July 30, 2016, 12:00-13:00, Hall-1
Chairperson: Norio Sakai
(Graduate School of Medicine, Osaka University)

Torayuki Okuyama (National Center for Child Health and Development)
Therapeutic advances in treatment of inherited rare diseases

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Corporate Seminar-VIII
(Shire-Japan)

Date: July 29, 2016, 12:00-13:00, Hall-2
Chairperson: Hirokazu Iwamuro
(Juntendo University Graduate School of Medicine)

Vivian Choi (Discovery Therapeutics, Research & Nonclinical Development, Shire)
Gene therapy: Emerging class of therapeutics with transformative potential in rare diseases