THE 17th ANNUAL MEETING

JSGT2011

JAPAN SOCIETY OF GENE THERAPY

Program & Abstracts

Date
July 15-17, 2011

Venue
Centennial Hall Kyushu University School of Medicine
3-1-1 Maidashi, Higashi-ku, Fukuoka city, 812-8582
Fukuoka

JSGT Home-page URL: *http://jsgt.jp*

The 17th Annual Meeting of JSGT 2011

Venue: Centennial Hall Kyushu University School of Medicine, Fukuoka.

Time Table

Day I Friday, July 15

10:00~10:05 **Opening Remarks: President Kenzaburo Tani**

10:05~11:40 **Best Presentaion** (**PB1~PB6) (E)** *Chairperson: Yoshiro Niitsu & Jun Yoshida*

11:40~11:55 **2nd Takara Bio Award Lecture** *Chairperson: Yasufumi Kaneda*

Shin-ichi Muramatsu (Division of Neurology, Jichi Medical University)

"A phase I study of aromatic L-amino acid decarboxylase gene therapy for Parkinson's disease"

12:00~19:20 Poster Viewing (PO88~PO114)

12:00~12:50 **Corporate Seminar I** *Chairperson:Yasufumi Kaneda*

Ryuichi Morishita (AnGes MG, Inc.)

"New era of gene therapy drug development"

Corporate Seminar II *Chairperson: Yoshikazu Yonemitsu*

Masato Okamoto (tella, Inc.)

"Dendritic cell-based cancer vaccine: Bench to bedside"

12:50~13:20 **General Assembly**

13:25~13:55 **Presidential Lecture (E)** *Chairperson: Shigetaka Asano*

Kenzaburo Tani (Kyushu University School of Medicine)

"New strategies for cancer-targeting cell and gene therapy"

14:00~14:50 **Special Lecture I (E)** *Chairperson: Keiya Ozawa*

Inder M. Verma (The Salk Institute for Biological Studies)

"Viruses as allies of man: From swords to ploughshares"

15:00~15:50 **Special Lecture II (E)** *Chairperson: Tatsutoshi Nakahata*

Malcolm K. Brenner (Center for Cell and Gene Therapy, Baylor College of Medicine)

"Saving cell and gene therapy from the valley of death"

15:50~16:00 Coffee Break

16:00~18:00 **Symposium I: "Progress of cell and gene targeting technology in gene therapy" (E)**

Chairpersons: Hirofumi Hamada & Hiroyuki Nakai

Koichi Miyake (Nippon Medical School)

"Development of cell targeting strategy using HIV vectors pseudotyped with HIV envelope"

Hiroaki Uchida (Tokyo University of Pharmacy and Life Sciences)

"Fully retargeted herpes simplex virus vector by co-engineering of viral glycoproteins"

Hideho Okada (University of Pittsburgh Cancer Institute)

"Promotion of type-1 response for effective brain tumor immunotherapy"

Shun'ichi Kuroda (Nagoya University)

"Retargeting strategy of bio-nanocapsules, a hybrid of non-viral and viral vectors"

Yoshiki Katayama (Kyushu University)

"Disease cell-specific gene regulation delivery system using protein kinase-responsive carriers"

Kazunori Aoki (National Cancer Center Research Institute)

"Development of targeted virus therapy using the adenovirus library displaying random peptides on the fiber knob"

16:00~16:30 **Educational Lecture I** *Chairperson: Takashi Shimada*

Hiromitsu Nakauchi (The Institute of Medical Science, University of Tokyo)

"Generation of blood cells from pluripotent stem cells"

16:30~17:20 Oral Session 1-1: Development of Immune Gene Therapy (OR7~OR11) (E)

Chairpersons: Kounosuke Mitani & Hidetoshi Sumimoto

17:20~18:20 Oral Session 1-2: Development of Immune Gene Therapy (OR12~OR17) (E)

Chairpersons: Yukoh Nakazaki & Toshiro Shirakawa

18:20~19:20 Poster Discussion (PO88~PO114)

19:20~20:30 **Get-Together**

Day II Saturday, July 16

08:30~10:30 **Symposium II: International Symposium**
"Trends of gene & cell therapy as translational research" (E)
Chairpersons: Tomoki Todo & Inder Verma

Malcolm K. Brenner (Center for Cell and Gene Therapy, Baylor College of Medicine)
"Inducible caspase9 safety switch for the control of cellular therapies"
Richard J. Samulski (University of North Carolina a Chapel Hill, Gene Therapy Center)
"Designing AAV viral vectors for clinical translation"
Thierry VandenDriessche (Free University of Brussels)
"Gene therapy for hemophilia: Translational studies and clinical trials"
Chae-Ok Yun (Hanyang University)
"Optimizing DC vaccination by combination with cytokine-expressing oncolytic adenoviruses"
Shu Wang (National University of Singapore)
"Human pluripotent stem cell-derived neural stem cells as cancer gene therapy vectors"
William R. Hiatt (University of Colorado School of Medicine)
"Role of gene and cell therapy for peripheral artery disease"
Philip D. Gregory (Sangamo Biosciences Inc)
"In vivo genome editing restores haemostasis in a mouse model of haemophilia"

08:30~09:30 Oral Session 2: Cancer Stem & iPS Cells (OR18~OR23) *Chairpersons: Yasushi Ino & Toshihiko Okazaki*
09:30~10:40 Oral Session 3: Development of Non-viral Vectors (OR24~OR30) (E)
Chairpersons: Masaaki Mizuno & Takanori Yokota

08:30~16:00 Poster Viewing (continue from Day 1: display alone)

10:50~11:40 **Special Lecture III (E)** *Chairperson: Fumio Endo*
Thierry VandenDriessche (Free University of Brussels)
"Recent progress in gene therapy in Europe"

11:50~12:40 **Corporate Seminar III** *Chairperson: Yoshikazu Yonemitsu*
Yoshikazu Yonemitsu (DNAVEC Corporation)
"Phase I/IIa, open-label, dose escalation clinical study using DVC1-0101 to treat peripheral arterial disease"
William R. Hiatt (DNAVEC Corporation)
"Regulatory considerations in clinical trials for PAD in USA"
Corporate Seminar IV *Chairperson: Masatoshi Tagawa*
Hideaki Shimada (MEDINET Co., Ltd.)
"Perspectives of molecular and cellular therapy for cancer-Attractive approaches in surgical oncology-"

12:50~13:40 **Special Lecture IV (E)** *Chairperson: Yoshikatsu Eto*
Richard J. Samulski (University of North Carolina a Chapel Hill, Gene Therapy Center)
"From bench to bedside in half the time"

13:50~15:50 **Symposium III: Joint Symposium with the Japanese Cancer Association**
"Trends of molecular & cell therapy for malignancies as translational research"
Chairpersons: Toshihiko Wakabayashi & Teruhiko Yoshida

Hiroaki Ikeda (Mie University Graduate School of Medicine)
"Antigen receptor gene-modified lymphocytes: Harnessing T cells for effective cancer treatment"
Toshiyoshi Fujiwara (Okayama University Graduate School of Medicine)
"Molecular imaging and multidisciplinary therapy for human cancer with telomerase-specific replication-selective adenovirus"
Hideyoshi Harashima (Hokkaido University)
"Multifunctional Envelope-type Nano Device for non-viral gene delivery: Concept and application for nanomedicine"
Atsushi Natsume (Nagoya University School of Medicine)
"Immunotherapy using retrovirally engineered T cells expressing chimeric antigen receptors specific to glioma-asssociated antigens"
Toru Kondo (Ehime University Proteo-Medicine Research Center)
"Glim: A novel marker and target for glioblastoma-initiating cells"
Kyogo Itoh (Kurume University, School of Medicine)
"Clinical benefits and biomarkers of personalized peptide vaccination"

13:50~14:20 **Educational Lecture II** *Chairperson: Hiromi Kumon*
Koichi Akashi (Kyushu University School of Medicine)
"Cancer Stem Cells in Human Hematological Malignancies"

14:20~15:00 Oral Session 4-1: Development of Adenoviral Vector Systems & Therapies (OR31~OR34)
Chairpersons: Ken-ichiro Kosai & Izumu Saito
15:00~15:50 Oral Session 4-2: Development of Adenoviral Vector Systems & Therapies (OR35~OR39)
Chairpersons: Koichi Miyake & Hiroaki Mizukami

16:00~18:00 **Symposium IV: Asian Session**
"Trends of gene & cell therapy as translational research in Asia" (E)
Chairpersons: Marie Chia-mi Lin & Masatoshi Tagawa

Keun-Hong Park (CHA University, Korea)
"Specific gene delivery using PLGA nanoparticles for stem cell differentiation"
Lih-Hwa Hwang (National Yang-Ming University, Taiwan)
"Gene therapies for hepatocellular carcinoma in animal studies"
Il Ung Oh (Korea Food and Drug Administration, Korea)
"Gene therapy in Korea"
Hongyan Chen (Fudan University, Shanghai)
"Diabetes treatment: Cell & gene therapy"
Marie Chia-mi Lin (The Chinese University of Hong Kong, China)
"Development of highly effective and safe PEI-CyD-FA polymeric nanoparticles for cancer gene therapy"
Yasutomo Nasu (Okayama University Hospital)
"Prostate cancer gene therapy as translational research-from HSV-tk to REIC/Dkk-3-"

16:00~16:30 **Educational Lecture III** *Chairperson: Nobuhiko Emi*
Toshio Kitamura (The Institute of Medical Science, The University of Tokyo)
"Animal models for AML, MDS and MPN"

16:30~17:20 Oral Session 5-1: Human Clinical Trials (OR40~OR44) (E) *Chairpersons: Akinobu Gotoh & Yasuhiro Ikeda*
17:20~18:20 Oral Session 5-2: Basic Sciences for Gene Therapy (OR45~OR50) (E)
Chairpersons: Takashi Okada & Yoshihiko Watanabe

19:00~21:00 **Welcome Reception**

Day III Sunday, July 17

08:10~10:10 **Symposium V: "Development of gene therapies for inherited and acquired immune deficient diseases"**
Chairpersons: Makoto Otsu & Masafumi Onodera
Toshinao Kawai (National Center for Child Health and Development)
"Gene therapy for a patient with chronic granulomatous disease"
Masafumi Onodera (National Center for Child Health and Development)
"What we learnt from the gene therapy for ADA deficiency"
Kohsuke Imai (National Defense Medical College)
"Hematopoietic stem cell transplantation and gene therapy for Wiskott-Aldrich syndrome"
Toru Uchiyama (Tohoku University School of Medicine)
"The progress of stem cell gene therapy for primary immunodeficiency"
Elizabeth M. Kang (National Institutes of Health, USA)
"Gene therapy for chronic granulomatous disease"
Philip D. Gregory (Sangamo Biosciences Inc)
"ZFN-edited CD4+ T cells for HIV/AIDS therapy: Phase 1 trials of SB-728-T"

08:20~09:10 Oral Session 6: Development of Oncolytic Virus Therapy (1) (OR51~OR55)
Chairpersons: Hideki Kasuya & Masato Yamamoto
09:10~10:00 Oral Session 7: T Cell Gene Therapy (OR56~OR60) *Chairpersons: Atsushi Takahashi & Masashi Urabe*

10:20~12:00 **Symposium VI: "Current status and prospects of gene therapy for vascular diseases"**
Chairpersons: Kensuke Egashira & Yoshikazu Yonemitsu
William R Hiatt (University of Colorado School of Medicine)
"Result of phase III TAMARIS trial"
Toyoaki Murohara (Nagoya University Graduate School of Medicine)
"Actin-binding protein Girdin and its Akt-mediated phosphorylation regulate neointima formation vascular injury"
Ryuichi Morishita (Osaka University)
"Development of therapeutic angiogenesis gene therapy using HGF"
Tohru Minamino (Chiba University Graduate School of Medicine)
"Novel strategy for therapeutic angiogenesis"
Takuya Matsumoto (Kyushu University)
"Phase I/IIa, open-labeled, dose escalation clinical study using FGF-2 gene mounted Sendai virus vector for critically ischemic limbs"

10:10~10:40 **Educational Lecture IV** *Chairperson: Hideaki Tahara*
Koji Tamada (Yamaguchi University Graduate School of Medicine)
"Gene-modified tumor cell vaccine to regulate immune co-signal functions"

10:40~11:50 Oral Session 8: Development of Adeno-Associated Virus Vectors (OR61~OR67) (E)
Chairpersons: Yukihiko Hirai & Hiroyuki Nakai

12:10~13:00 **Corporate Seminar V** *Chairperson: Kazutoh Takesako*
Junichi Mineno (TAKARA BIO INC.)
"Biosafety Assay in clinical development of gene therapy"
Corporate Seminar VI *Chairperson: Tomotoshi Marumoto*
Yasushi Soda (Chugai Pharmaceutical Co., Ltd.)
"Tumor-derived endothelial cells can contribute to the resistance to anti-VEGF therapy"
Masato Yamamoto (Chugai Pharmaceutical Co., Ltd.)
"Adenovirus library for novel transductional targeting"

13:00~15:00 **Symposium VII: Joint Symposium with Japanese Society of Gene Design and Delivery**
"Novel gene/siRNA delivery system: Development, evaluation and application"
Chairpersons: Mahito Nakanishi & Takuro Niidome

Shigeru Kawakami (Kyoto University)
"Cell-selective gene delivery using glycosylated bubble lipoplex with ultrasound exposure"
Kentaro Kogure (Kyoto Pharmaceutical University)
"Noninvasive and efficient delivery of macromolecular medicine via iontophoresis"
Jeong-Hun Kang (National Cerebral and Cardiovascular Center Research Institute)
"Tissue or disease-targeted gene delivery systems"
Shin-ichi Muramatsu (Jichi Medical University)
"*In vivo* imaging in cell and gene therapy for Parkinson's disease"
Junichi Mineno (Takara Bio Inc.)
"Efficient transfer and expression of multiple genes by retroviral vector"
Mahito Nakanishi (National Institute of Advanced Industrial Science and Technology)
"Development of defective and persistent Sendai virus vector (SeVdp) and its application to cell reprogramming"

13:00~13:30 **Educational Lecture V** *Chairperson: Kenji Nakano*
Keiichi Nakayama (Kyushu University)
"Cell cycle and cancer stem cells"

13:30~14:20 Oral Session 9-1: Gene & Cell Therapy for Genetic and Other Diseases (OR68~OR72) (E)
Chairpersons: Akihiro Iida & Noriyuki Kasahara
14:20~15:00 Oral Session 9-2: Gene & Cell Therapy for Genetic and Other Diseases (OR73~OR76) (E)
Chairpersons: Torayuki Okuyama & Katsuto Tamai

15:10~16:50 **Symposium VIII: "Current status and prospect of gene therapy for inherited diseases"**
Chairpersons: Makoto Migita & Toya Ohashi

Torayuki Okuyama (National Center for Child Health and Development)
"How to solve the problem in clinical application of gene therapy for congenital disorders in Japan"
Akihiro Kume (Jichi Medical University)
"Gene therapy for Phenylketonuria"
Makoto Otsu (University of Tokyo)
"Stem cell gene therapy for primary immunodeficiency diseases: Where are we today and where should we go?"
Shin'ichi Takeda (National Center of Neurology and Psychiatry)
"Advances in molecular and cell therapy on Duchenne muscular dystrophy"
Seng H. Cheng (Genzyme, part of the sanofi Group)
"Gene therapeutic strategies for treating spinal muscular atrophy"

15:10~16:00 Oral Session 10-1: Development of Oncolytic Virus Therapy (2) (OR77~OR81) (E)
Chairpersons: Makoto Inoue & Takashi Nakamura
16:00~17:00 Oral Session 10-2: Development of Oncolytic Virus Therapy (2) (OR82~OR87) (E)
Chairpersons: Masato Abei & Atsushi Watanabe

17:00~17:10 **Closing Remarks: President Kenzaburo Tani &**
Welcome Greetings from the Next President: Fumio Endo

PROGRAM

Presidential Lecture

Date: July 15, 2011, 13:25-13:55, Main-Hall
Chairperson: Shigetaka Asano

Kenzaburo Tani *(Medical Institute of Bioregulation, Kyushu University)*
New strategies for cancer-targeting cell and gene therapy

Special Lecture I (E)

Date: July 15, 2011, 14:00-14:50, Main-Hall
Chairperson: Keiya Ozawa

Inder M. Verma *(The Salk Institute for Biological Studies)*
Viruses as allies of man: From swords to ploughshares

Special Lecture II (E)

Date: July 15, 2011, 15:00-15:50, Main-Hall
Chairperson: Tatsutoshi Nakahata

Malcolm K. Brenner *(Center for Cell and Gene Therapy, Baylor College of Medicine)*
Saving cell and gene therapy from the valley of death

Special Lecture III (E)

Date: July 16, 2011, 10:50-11:40, Main-Hall
Chairperson: Fumio Endo

Thierry VandenDriessche *(Free University of Brussels)*
Recent progress in gene therapy in Europe

Special Lecture IV (E)

Date: July 16, 2011, 12:50-13:40, Main-Hall
Chairperson: Yoshikatsu Eto

Richard J. Samulski *(University of North Carolina a Chapel Hill, Gene Therapy Center)*
From bench to bedside in half the time

Educational Lecture I

Date: July 15, 2011, 16:00-16:30, Sub-Hall 3
Chairperson: Takashi Shimada

Hiromitsu Nakauchi *(The Institute of Medical Science, University of Tokyo)*
Generation of blood cells from pluripotent stem cells

Educational Lecture II

Date: July 16, 2011, 13:50-14:20, Sub-Hall 3
Chairperson: Hiromi Kumon

Koichi Akashi *(Kyushu University School of Medicine)*
Cancer stem cells in human hematological malignancies

Educational Lecture III

Date: July 16, 2011, 16:00-16:30, Sub-Hall 3
Chairperson: Nobuhiko Emi

Toshio Kitamura *(The Institute of Medical Science, The University of Tokyo)*
Animal models for AML, MDS and MPN

Educational Lecture IV

Date: July 17, 2011, 10:10-10:40, Sub-Hall 3
Chairperson: Hideaki Tahara

Koji Tamada *(Yamaguchi University Graduate School of Medicine)*
Gene-modified tumor cell vaccine to regulate immune co-signal functions

Educational Lecture V

Date: July 17, 2011, 13:00-13:30, Sub-Hall 3
Chairperson: Kenji Nakano

Keiichi Nakayama *(Kyushu University)*
Cell cycle and cancer stem cells

Symposium I

Progress of cell and gene targeting technology in gene therapy

Date: July 15, 2011, 16:00-18:00, Main-Hall
Chairpersons: Hirofumi Hamada & Hiroyuki Nakai

S1-1. Koichi Miyake *(Nippon Medical School)*
Development of cell targeting strategy using HIV vectors pseudotyped with HIV envelope

S1-2. Hiroaki Uchida *(Tokyo University of Pharmacy and Life Sciences)*
Fully retargeted herpes simplex virus vector by co-engineering of viral glycoproteins

S1-3. Hideho Okada *(University of Pittsburgh Cancer Institute)*
Promotion of type-1 response for effective brain tumor immunotherapy

S1-4. Shun'ichi Kuroda *(Nagoya University)*
Retargeting strategy of bio-nanocapsules, a hybrid of non-viral and viral vectors

S1-5. Yoshiki Katayama *(Kyushu University)*
Disease cell-specific gene regulation delivery system using protein kinase-responsive carriers

S1-6. Kazunori Aoki *(National Cancer Center Research Institute)*
Development of targeted virus therapy using the adenovirus library displaying random peptides on the fiber knob

Symposium II

International Symposium

Trends of gene & cell therapy as translational research

Date: July 16, 2011, 8:30-10:30, Main-Hall
Chairpersons: Tomoki Todo & Inder Verma

S2-1. Malcolm K. Brenner *(Center for Cell and Gene Therapy, Baylor College of Medicine)*
Inducible caspase9 safety switch for the control of cellular therapies

S2-2. Richard J. Samulski *(University of North Carolina a Chapel Hill, Gene Therapy Center)*
Designing AAV viral vectors for clinical translation

S2-3. Thierry VandenDriessche *(Free University of Brussels)*
Gene therapy for hemophilia: Translational studies and clinical trials

S2-4. Chae-Ok Yun *(Hanyang University)*
Optimizing DC vaccination by combination with cytokine-expressing oncolytic adenoviruses

S2-5. Shu Wang *(National University of Singapore)*
Human pluripotent stem cell-derived neural stem cells as cancer gene therapy vectors

S2-6. William R Hiatt *(University of Colorado School of Medicine)*
Role of gene and cell therapy for peripheral artery disease

S2-7. Philip D. Gregory *(Sangamo Biosciences Inc)*
In vivo genome editing restores haemostasis in a mouse model of haemophilia

Symposium III

Joint Symposium with the Japanese Cancer Association

Trends of molecular & cell therapy for malignancies as translational research

Date: July 16, 2011, 13:50-15:50, Main-Hall
Chairpersons: Toshihiko Wakabayashi & Teruhiko Yoshida

S3-1. Hiroaki Ikeda *(Mie University Graduate School of Medicine)*
Antigen receptor gene-modified lymphocytes: Harnessing T cells for effective cancer treatment

S3-2. Toshiyoshi Fujiwara *(Okayama University Graduate School of Medicine)*
Molecular imaging and multidisciplinary therapy for human cancer with telomerase-specific replication-selective adenovirus

S3-3. Hideyoshi Harashima *(Hokkaido University)*
Multifunctional Envelope-type Nano Device for non-viral gene delivery: Concept and application for nanomedicine

S3-4. Atsushi Natsume *(Nagoya University School of Medicine)*
Immunotherapy using retrovirally engineered T cells expressing chimeric antigen receptors specific to glioma-asssociated antigens

S3-5. Toru Kondo *(Ehime University Proteo-Medicine Research Center)*
Glim: A novel marker and target for glioblastoma-initiating cells

S3-6. Kyogo Itoh *(Kurume University, School of Medicine)*
Clinical benefits and biomarkers of personalized peptide vaccination

Symposium IV

Asian Session

Trends of gene & cell therapy as translational research in Asia

Date: July 16, 2011, 16:00-18:00, Main-Hall
Chairpersons: Marie Chia-mi Lin & Masatoshi Tagawa

S4-1. Keun-Hong Park *(CHA University, Korea)*
Specific gene delivery using PLGA nanoparticles for stem cell differentiation

S4-2. Lih-Hwa Hwang *(National Yang-Ming University, Taiwan)*
Gene therapies for hepatocellular carcinoma in animal studies

S4-3. Il Ung Oh *(Korea Food and Drug Administration, Korea)*
Gene therapy in Korea

S4-4. Hongyan Chen *(Fudan University, Shanghai)*
Diabetes treatment: Cell & gene therapy

S4-5. Marie Chia-mi Lin *(The Chinese University of Hong Kong, China)*
Development of highly effective and safe PEI-CyD-FA polymeric nanoparticles for cancer gene therapy

S4-6. Yasutomo Nasu *(Okayama University Hospital)*
Prostate cancer gene therapy as translational research-from HSV-tk to REIC/Dkk-3-

Symposium V

Development of gene therapies for inherited and acquired immune deficient diseases

Date: July 17, 2011, 8:10-10:10, Main-Hall
Chairpersons: Makoto Otsu & Masafumi Onodera

S5-1. Toshinao Kawai *(National Center for Child Health and Development)*
Gene therapy for a patient with chronic granulomatous disease

S5-2. Masafumi Onodera *(National Center for Child Health and Development)*
What we learnt from the gene therapy for ADA deficiency

S5-3. Kohsuke Imai *(National Defense Medical College)*
Hematopoietic stem cell transplantation and gene therapy for Wiskott-Aldrich syndrome

S5-4. Toru Uchiyama *(Tohoku University School of Medicine)*
The progress of stem cell gene therapy for primary immunodeficiency

S5-5. Elizabeth M. Kang *(National Institutes of Health, USA)*
Gene therapy for chronic granulomatous disease

S5-6. Philip D. Gregory *(Sangamo Biosciences Inc)*
ZFN-edited CD4+ T cells for HIV/AIDS therapy: Phase 1 trials of SB-728-T

Symposium VI

Current status and prospects of gene therapy for vascular diseases

Date: July 17, 2011, 10:20-12:00, Main-Hall
Chairpersons: Kensuke Egashira & Yoshikazu Yonemitsu

S6-1. William R Hiatt *(University of Colorado School of Medicine)*
Result of phase III TAMARIS trial

S6-2. Toyoaki Murohara *(Nagoya University Graduate School of Medicine)*
Actin-binding protein Girdin and its Akt-mediated phosphorylation regulate neointima formation vascular injury

S6-3. Ryuichi Morishita *(Osaka University)*
Development of therapeutic angiogenesis gene therapy using HGF

S6-4. Tohru Minamino *(Chiba University Graduate School of Medicine)*
Novel strategy for therapeutic angiogenesis

S6-5. Takuya Matsumoto *(Kyushu University)*
Phase I/IIa, open-labeled, dose escalation clinical study using FGF-2 gene mounted Sendai virus vector for critically ischemic limbs

Symposium VII

Joint Symposium with Japanese Society of Gene Design and Delivery

Novel gene/siRNA delivery system: Development, evaluation and application

Date: July 17, 2011, 13:00-15:00, Main-Hall
Chairpersons: Mahito Nakanishi & Takuro Niidome

S7-1. Shigeru Kawakami *(Kyoto University)*
Cell-selective gene delivery using glycosylated bubble lipoplex with ultrasound exposure

S7-2. Kentaro Kogure *(Kyoto Pharmaceutical University)*
Noninvasive and efficient delivery of macromolecular medicine via iontophoresis

S7-3. Jeong-Hun Kang *(National Cerebral and Cardiovascular Center Research Institute)*
Tissue or disease-targeted gene delivery systems

S7-4. Shin-ichi Muramatsu *(Jichi Medical University)*
***In vivo* imaging in cell and gene therapy for Parkinson's disease**

S7-5. Junichi Mineno *(Takara Bio Inc.)*
Efficient transfer and expression of multiple genes by retroviral vector

S7-6. Mahito Nakanishi *(National Institute of Advanced Industrial Science and Technology)*
Development of defective and persistent Sendai virus vector (SeVdp) and its application to cell reprogramming

Symposium VIII

Current status and prospect of gene therapy for inherited diseases

Date: July 17, 2011, 15:10-16:50, Main-Hall
Chairpersons: Makoto Migita & Toya Ohashi

S8-1. Torayuki Okuyama *(National Center for Child Health and Development)*
How to solve the problem in clinical application of gene therapy for congenital disorders in Japan

S8-2. Akihiro Kume *(Jichi Medical University)*
Gene therapy for Phenylketonuria

S8-3. Makoto Otsu *(University of Tokyo)*
Stem cell gene therapy for primary immunodeficiency diseases: Where are we today and where should we go?

S8-4. Shin'ichi Takeda *(National Center of Neurology and Psychiatry)*
Advances in molecular and cell therapy on Duchenne muscular dystrophy

S8-5. Seng H. Cheng *(Genzyme, part of the Sanofi Group)*
Gene therapeutic strategies for treating spinal muscular atrophy

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2nd Takara Bio Award Lecture

Date: July 15, 2011, 11:40~11:55, Main-Hall
Chairperson: Yasufumi Kaneda

Shin-ichi Muramatsu *(Division of Neurology, Jichi Medical University)*
"A phase I study of aromatic L-amino acid decarboxylase gene therapy for Parkinson's disease "

Best Presentation (E) (Abstracts BP1~BP6)

Date: July 15, 2011, 10:05-11:40, Main-Hall
Chairperson: Yoshiro Niitsu & Jun Yoshida

BP-1. A novel high throughput approach to analyze adeno-associated virus capsid functions using barcoded virus libraries and a deep sequencing technology
Adachi K., Enoki T., Naitza C. S., Nakai H.

BP-2. Inactive Sendai virus (HVJ-E) induces selective cell death in prostate cancer cells through TRAIL induction
Miyagi-Matsushima T., Takashi S., Inoue Y., Kaneda Y.

BP-3. Hematopoietic differentiation of common marmoset ES cells is promoted by the overexpression of LYL1
Kawano H., Marumoto T., Okada M., Inoue T., Nii T., Liao J., Yamaguchi S., Nagai Y., Inoue H., Sasaki E., Miura Y., Tani K.

BP-4. AADC gene therapy for Parkinson's disease: Four years of follow-up
Muramatsu S., Fujimoto K., Kato S., Asari S., Mizukami H., Ikeguchi K., Kawakami T., Urabe M., Kume A., Sato T., Watanabe E., Ozawa K., Nakano I.

BP-5. "Add-back" therapy with HSV-TK gene-modified lymphocytes after T-cell-depleted haploidentical hematopoietic stem-cell transplantation, phase I study
Wakeda T.

BP-6. Gene therapy for aromatic L-amino acid decarboxylase deficiency - One year follow-up
Hwu W-L., Muramatsu S., Wu R-W., Tseng S-H., Lee N-C., Snyder R. O., Chien Y-H.

Day 1: July 15, 2011

Oral Session 1-1 & 1-2 (E) (Abstracts OR7~OR17)
Development of Immune Gene Therapy

16:30-17:20, Sub-Hall 3
Chairpersons: Kounosuke Mitani & Hidetoshi Sumimoto

OR-7. Immunotherapy with gene-modified tumor vaccination induced antagonistic antibodies to tumor promoting factors
Nakazaki Y., Souders N., Koyama S., Harrison N., Thompson L., Hodi F. S., Dranoff G.

OR-8. Absence of LTB4/BLT1 axis enhances memory antitumor immunity responses induced by GM-CSF gene-transduced tumor cells, mainly in a $CD4^+$ T cell dependent manner
Yokota Y., Inoue H., Watanabe A., Sakamoto C., Narusawa M., Miyamoto S., Takayama K., Nakanishi Y., Yokomizo T., Tani K.

OR-9. WT1 expression in solid cancers in 4 organs
Maki T., Miyamoto M., Tsuchikawa T., Kyogoku N., Kuroda A., Yamamura Y., Abiko T., Hida Y., Sichinohe T., Tanaka E., Kaga K., Hirano S., Kondo S.

OR-10. GM-CSF gene-transduced murine cancer stem cells are susceptible to antitumor $CD8^+$ T cell immunity
Sakamoto C., Inoue H., Narusawa M., Yokota Y., Miyamoto S., Watanabe A., Inoue M., Takayama K., Hasegawa M., Nakanishi Y., Tani K.

OR-11. Single oral vaccination with human adenovirus 40 vector elicits immune responses
Yamasaki S., Brown E., Davydova J., Vickers S. M., Yamamoto M.

17:20-18:20, Sub-Hall 3
Chairpersons: Yukoh Nakazaki & Toshiro Shirakawa

OR-12. Enhancement of the anti-tumor effect of combination with human tumor necrosis factor-alpha (hTNF-α) gene delivery and gemcitabine by inhibition of NF-κB for pancreatic cancer
Fujiwara Y., Ohashi T., Haruki K., Furukawa K., Shimada Y., Iida T., Shiba H., Uwagawa T., Kobayashi H., Misawa T., Yanaga K.

OR-13. Preparation of small plasmid complex for cancer therapy and application to medium animal clinical study
Yoshihara C., Koyama Y., Iida-Tanaka N., Ito T., Okano S.

OR-14. Diverse subtypes of DCs expressing Ly49D residing are dominantly induced in tumor draining lymph nodes during the regression of *in vivo* administration of GM-CSF gene transduced lung cancer cells
Narusawa M., Inoue H., Tanaka Y., Yokota Y., Sakamoto C., Miyamoto S., Inoue T., Inoue M., Takayama K., Hasegawa M., Nakanishi Y., Tani K.

OR-15. Interleukin-10 prevents the progression of peritoneal fibrosis
Onishi A., Urabe M., Morishita Y., Hirahara I., Tsukahara T., Mizukami H., Kume A., Kusano E., Ozawa K.

OR-16. Immunological aspects of REIC/Dkk-3 gene therapy : the mechanism of the robust anti-tumor effects
Watanabe M., Huang P., Abarzua F., Kaku H., Sasaki K., Ueki H., Wananabe T., Nasu Y., Kumon H.

OR-17. Syngeneic hematopoietic stem cell transplantation enhances the antitumor immunity of intratumoral type I interferon gene transfer for sarcoma
Udagawa T., Narumi K., Ochiya T., Yoshida T., Aoki K.

PROGRAM

Day 2: July 16, 2011

Oral Session 2 (Abstracts OR18~OR23)
Cancer Stem & iPS Cells

8:30-9:30, Sub-Hall 3
Chairpersons: Yasushi Ino & Toshihiko Okazaki

OR-18. Targeting glioblastoma-derived cancer stem cells using tumor-specific promoter-enhanced oncolytic HSV-1
Ino Y., Takahashi M., Nakatsubo T., Fukuhara H., Todo T.

OR-19. Variation in hematopoietic potential of adult and embryonic skin-derived iPSC lines
Inoue T., Kulkeaw K., Horio Y., Okayama S., Mizuochi C., Akashi K., Tani K., Sugiyama D.

OR-20. Efficient differentiation of common marmoset ES cells into hemangioblasts by the inhibition of PI3K-AKT pathway
Nii T., Marumoto T., Kawano H., Yamaguchi S., Nagai Y., Miura Y., Liao J., Okada M., Tani K.

OR-21. A potent *in vitro* bystander effect in the suicide gene therapy using iPS cells transduced with herpes simplex virus-thymidine kinase gene and ganciclovir
Namba H., Koizumi S., Yamazoe T., Okimoto Y., Kaneko S., Nakauchi H.

OR-22. Characterization of embryonal carcinoma cells emerged in the process of iPSC generation from common marmoset fibroblasts
Yamaguchi S., Marumoto T., Nii T., Kawano H., Liao J., Nagai Y., Okada M., Takahashi A., Inoue H., Sasaki E., Okano S., Miura Y., Tani K.

OR-23. A pluripotent stem cell specific cell-suicide system for prophylaxis and treatment of teratocarcinoma in induced pluripotent stem cell-based cell and gene therapy
Kaneko S., Okimoto Y., Yasui Y., Nakauchi H.

Oral Session 3 (E) (Abstracts OR24~OR30)
Development of Non-viral Vectors

9:30-10:40, Sub-Hall 3
Chairpersons: Masaaki Mizuno & Takanori Yokota

OR-24. Efficient *in vivo* delivery of siRNA into brain capillary endothelial cells along with endogenous lipoprotein
Kuwahara H., Nishina K., Yoshida K., Nishina T., Piao W., Mizusawa H., Yokota T.

OR-25. Efficient *in vivo* delivery of α-tocopherol-conjugated siRNA from colorectum to liver
Nishina K., Murakami M., Yoshida K., Kuwahara H., Mizusawa H., Yokota T.

OR-26. Non-viral siRNA vectors based on micellar nanoparticles with endosome pH-activatable core
Yu H., Wu H., Gao J.

OR-27. Novel adenovirus complexes having artificial envelope for tumor gene therapy
Koyama Y., Yoshihara C., Hamada K.

OR-28. Block co-polymer based gene therapy for disseminated cancer: Perspectives to clinical trials
Nakano K., Kumagai M., Shimoda S., Wakabayashi R., Nishiyama N., Kataoka K.

OR-29. Peptide-mediated targeting of liposomes to TrkB receptor bearing cells
Ranjan S., Sood R., Dudas J., Glückert R., Schrott-Fischer A., Roy S., Pyykkö I., Kinnunen P. K. J.

OR-30. Bio-nanocapsule-lipoplex conjugate for highly efficient cell-specific DNA transfection
Oeda A., Yamada M., Kuroda S.

Oral Session 4-1 & 4-2 (Abstracts OR31~OR39)
Development of Adenoviral Vector Systems & Therapies

14:20-15:00, Sub-Hall 3
Chairpersons: Ken-ichiro Kosai & Izumu Saito

OR-31. Suppression of leaky expression of adenovirus genes following transduction with a replication-incompetent adenovirus vector by incorporation of microRNA-targeted sequences into the E2A and E4 genes
Shimizu K., Sakurai F., Katayama K., Mizuguchi H. Shimizu K., Sakurai F., Katayama K., Mizuguchi H.

OR-32. Development of an adenovirus vector lacking the virus-associated RNA expression
Machitani M., Katayama K., Sakurai F., Matsui H., Yamaguchi T., Suzuki T., Miyoshi H., Kawabata K., Mizuguchi H.

OR-33. Novel adenovirus vector generating system enabling adenoviral library with 10^10 diversity
Miura Y., Brown E., Davydova J., Aoki K., Yamamoto M.

OR-34. HB-EGF/HGF hepatic gene therapy for bile duct ligated cholestatic liver injury in mice: Their different and/or synergic therapeutic effects
Sakamoto K., Khai N. C., Wang Y., Maezono R., Tanoue K., Matsufuji H., Takamatsu H., Kosai K.

15:00-15:50, Sub-Hall 3
Chairpersons: Koichi Miyake & Hiroaki Mizukami

OR-35. Assessment of an altered E1B promoter on the specificity and potency of triple-regulated conditionally replicating adenoviruses (CRA): A new insight to generate ideal m-CRAs
Kosai K., Horikawa Y., Wang Y., Nagano S., Kamizono J., Ikeda M., Komiya S.

OR-36. Trichostatin A sensitizes apoptosis induced by soluble TRAIL-expressing MSCs
Uchibori R., Mizuguchi H., Tsukahara T., Urabe M., Mizukami H., Kume A., Ozawa K.

OR-37. Pancreatic cancer-selective adenovirus with redesigned AB-loop made via adenovirus library shows specificity mesothelin expressing cells
Miura Y., Brown E., Davydova J., Yamamoto M.

OR-38. E1B-55kDa-defective adenoviruses produce anti-tumor effects by inducing polyploidy
Tagawa M., Yamanaka M., Tada Y., Kawamura K., Okamoto S., Kobayashi H., Yang S., Yamauch S., Li W., Jiang Y. Y., Takiguchi Y., Shimada H., Hiroshima K., Tatsumi K.

OR-39. E10A, an adenovirus carrying endostatin gene, dramatically increased the tumor drug concentration of metronomic chemotherapy with low dose cisplatin in a xenograft mouse model for head and neck squamous cell carcinoma
Adhim Z., Lin X., Huang W., Nakamura T., Yasui H., Otsuki N., Nibu K., Fujisawa M., Shirakawa T.

Oral Session 5-1 (E) (Abstracts OR40~OR44)
Human Clinical Trials

16:30-17:20, Sub-Hall 3
Chairpersons: Akinobu Gotoh & Yasuhiro Ikeda

OR-40. A phase I/II study of reduced expression in immortalized cells (REIC/DKK-3) gene therapy for prostate cancer; Interim report
Sasaki K., Yasutomo Nasu Y., Kaku H., Watanabe M., Kanbara T., Wananabe T., Kumon H.

OR-41. The importance of IgG subclass and IgE response in cancer vaccination
Kyogoku N., Tsuchikawa T., Miyamoto M., Abiko T., Kuroda A., Maki T., Yamamura Y., Ichinokawa M., Tanaka K., Hirano S., Ikeda H., Kageyama S., Shiku H., Kondo S.

OR-42. Adenovirus-mediated interleukin-12 gene therapy for castration resistant prostate cancer: Report of a clinically responsed case
Kanbara T., Nasu Y., Sasaki K., Kaku H., Watanabe M., Wananabe T., Kumon H., Brenner M. K.

OR-43. A clinical study of a third-generation oncolytic HSV-1 (G47Δ) in patients with recurrent glioblastoma
Todo T., Ino Y.

OR-44. Preclinical long-term safety study of simian immunodeficiency virus (SIV)-based lentiviral vector for retinal gene transfer in non-human primates
Ikeda Y., Yonemitsu Y., Miyazaki M., Kohno R., Murakami Y., Sonoda N., Arima M., Goto Y., Murata T., Tabata T., Ueda Y., Hasegawa M., Sueishi K., Ishibashi T.

Oral Session 5-2 (E) (Abstracts OR45~OR50)
Basic Sciences for Gene Therapy

17:20-18:20, Sub-Hall 3
Chairpersons: Takashi Okada & Yoshihiko Watanabe

OR-45. Tumor-derived endothelial cell as a target for glioblastoma therapy
Soda Y., Friedmann-Morvinski D., Marumoto T., Soda M., Kesari S., Verma I. M.

OR-46. Distruption of common marmoset dystrophin mRNA to generate non-human primate DMD model
Okada H., Hayashita-Kinoh H., Chiyo T., Hohjoh H., Nitahara-Kasahara Y., Okada T., Takeda S.

OR-47. Transgenic mice reveal a novel potent tumor promoter that is aberrantly overexpressed in most human cancers
Takahashi A., Tokita H., Takahashi K., Takeoka T., Murayama K., Tomotsune D., Ohira M., Koda T., Nakagawara A., Tani K.

OR-48. Rescue of degenerating neurons in the cerebellum by lentiviral vector-based gene transfer
Hirai H.

OR-49. Addition of Polyethylene glycol to the serum-free supernatants of GaLV pseudotyped retrovirus allows efficient concentration of the virus while keeping its high virus-titer
Inaki M., Onodera M.

OR-50. Successful treatment of severe infantile hypophosphatasia by ex vivo gene therapy using bone marrow cells expressing bone targeted TNALP
Iijima O., Sugano H., Miyake K., Shimada T.

Day 3: July 17, 2011

Oral Session 6 (Abstracts OR51~OR55)
Development of Oncolytic Virus Therapy (1)

8:20-9:10, Sub-Hall 3
Chairpersons: Hideki Kasuya & Masato Yamamoto

OR-51. Oncolytic adenovirus inhibits transforming growth factor-β-induced epithelial-mesenchymal transition in human cancer cells
Hashimoto Y., Tazawa H., Yoshida R., Urata Y., Kagawa S., Fujiwara T.

OR-52. Oncolytic virotherapy for osteosarcoma with herpes simplex virus type 1 mutant HF10
Kohno S., Chiwata E., Toshitsuna S., Mineno J., Nishiyama Y.

OR-53. The impact of combination of Bevacizumab and oncolytic herpes virus hRr3 on the tumor microenvironment of pancreatic cancer xenograft models
Fukuda S., Kasuya H., Yamamura K., Kanzaki A., Gewen T., Fujii T., Takeda S., Nakao A.

OR-54. Chemotherapy sensitization of pancreatic cancer with oncolytic adenovirus expressing interferon-α
Han J., Armstrong L., Brown E., Aoki K., Vickers S., Yamamoto M., Davydova J.

OR-55. Adenovirus-mediated interferon-α gene therapy for pancreatic cancer
Davydova J., Armstrong L., Han J., Brown E., Aoki K., Vickers S., Yamamoto M.

Oral Session 7 (Abstracts OR56~OR60)
T Cell Gene Therapy

9:10-10:00, Sub-Hall 3
Chairpersons: Atsushi Takahashi & Masashi Urabe

OR-56. CCL2-CCR2 axis potentiates the anti-lung cancer reactivity mediated by redirected T cells using WT1-specific TCR gene transfer
Asai H., Fujiwara H., Ochi T., Jun A., Shirakata T., Nagai K., Miyazaki Y., Mineno J., Kuzushima K., Shiku H., Yasukawa M.

OR-57. hTERT is an immunogenic antigen for a novel gene-immunotherapy against adult T-cell leukemia
Miyazaki Y., Fujiwara H., Toshiki Ochi T., Asai H., Nagai K., An J., Ishida T., Okamoto S., Mineno J., Kuzushima K., Shiku H., Yasukawa M.

OR-58. Efficient and safe vectors for TCR gene therapy : Silencing of endogenous TCR improved the efficacy and safety of TCR gene therapy
Okamoto S., Ikeda H., Fujiwara H., Nukaya I., Yoshioka H., Kuzushima K., Yasukawa M., Shiku H., Mineno J.

OR-59. Analysis of TCR gene transferred T cells processed with RetroNectin®/OKT3 stimulation method
Oshikawa T., Tanaka S., Tanaka Y., Goto Y., Nukaya I., Mineno J.

OR-60. Engineered T lymphocytes expressing an anti-CD19 can specifically eradicate B-lymphoma cells
Tsukahara T., Ohmine K., Uchibori R., Urabe M., Mizukami H., Kume A., Riviere I., Sadelain M., Brentjens R. J., Ozawa K.

Oral Session 8 (E) (Abstracts OR61~OR67)
Development of Adeno-Associated Virus Vectors

10:40-11:50, Sub-Hall 3
Chairpersons: Yukihiko Hirai & Hiroyuki Nakai

OR-61. Assessment of AAV assembly-activating protein (AAP) function by using a simple and serotype-independent method
Enoki T., Adachi K., Naitza C. S., Nakai H.

OR-62. The role of the p5 promoter of adeno-associated virus in AAVS1-directed integration
Urabe M., Miyata S., Onishi A., Tsukahara T., Mizukami H., Kume A., Ozawa K.

OR-63. Effective transgene expression in non-human primate muscle with AAV type 9 vectors following immune suppression
Ishii A., Okada H., Hayashita-Kinoh H., Shin J-H., Okada T., Takeda S.

OR-64. AAV empty capsids mediate effective nuclear transportation of morpholino in the muscle cells
Hayashita-Kinoh H., Okada H., Chiyo T., Nitahara-Kasahara Y., Okada T., Takeda S.

OR-65. Fetal gene therapy for lethal murine hypophosphatasia
Sugano H., Iijima O., Watanabe A., Fukunaga Y., Shimada T.

OR-66. Gene therapy for MLD by intrathecal administration of type 9 AAV vector expressing ASA
Miyake N., Miyake K., Sakai A., Yamamoto M., Endo A., Suzuki H., Shimada T.

OR-67. Efficient *in vivo* delivery of shRNA-expressing AAV9 to dorsal root ganglion
Machida A., Kuwahara H., Mayra A., Kubodera T., Tomimitsu H., Hirai T., Enomoto M., Mizusawa H., Yokota T.

Oral Session 9-1 & 9-2 (E) (Abstracts OR68~OR76)
Gene & Cell Therapy for Genetic and Other Diseases

13:30-14:20, Sub-Hall 3
Chairpersons: Akihiro Iida & Noriyuki Kasahara

OR-68. Neonatal gene therapy for the mouse model of krabbe disease
Kobayashi H., Ariga M., Shimada Y., Izuka S., Yokoi T., Iwamoto T., Fukuda T., Ida H., Eto Y., Ohashi T.

OR-69. Consistent and robust factor IX expression in NAb-negative macaques by IV administration of AAV8 vector
Mizukami H., Mimuro J., Ishiwata A., Yagi H., Ohmori T., Madoiwa S., Tsukahara ., Urabe M., Kume A., Sakata Y., Ozawa K.

OR-70. Direct comparison of administration routes for AAV 8 mediated ocular gene therapy
Asakawa N., Igarashi T., Miyake N., Miyake K., Shimada T., Takahashi H.

OR-71. Development of DNA vaccine for high blood pressure-immunotherapy for angiotensin II
Nakagami H., Morishita R., Kaneda Y.

OR-72. Inhibition of HIV-1 replication in endoribonuclease gene modified CD4+ T cells
Chono H., Okamoto M., Inoue K., Dodo K., Tsuda H., Saito N., Kawano Y., Baba M., Mineno J.

14:20-15:00, Sub-Hall 3
Chairpersons: Torayuki Okuyama & Katsuto Tamai

OR-73. A useful non-viral procedure to induce liver-to-pancreas reprogramming to complement post-operative pancreatic endocrne dysfunction
Motoyama H., Kobayashi A., Miyagawa S.

OR-74. Cell transplantation study for hereditary tyrosinemita I model mice with mouse salivary gland-derived progenitors
Nakamura K., Matsumoto S., Hisatomi Y., Okumura K., Mitsubuchi H., Endo F.

OR-75. HMGB1 mobilizes PDGFRα-positive cells from bone marrow to regenerate injured epithelia
Tamai K., Chino T., Iinuma S., Manjyo N., Fujita R., Yamazaki T., Kikuchi Y., Kaneda Y.

OR-76. In vivo comparison of the stemness among $CD34^+$ cells derived from cord blood, bone marrow, and peripheral blood using NOD/SCID x IL-2Rγ^{null} (NOG) mice
Horiuchi Y., Otsu M., Kiyokawa N., Fujimoto J., Onodera M.

Oral Session 10-1 & 10-2 (E) (Abstracts OR77~OR87)
Development of Oncolytic Virus Therapy (2)

15:10-16:00, Sub-Hall 3
Chairpersons: Makoto Inoue & Takafumi Nakamura

OR-77. Efficient eradication of castration-resistant human prostate cancers by nonreplicating oncolytic virus,inactivated Sendai virus particle
Hatano K., Kawaguchi Y., Miyamoto Y., Nonomura N., Kaneda Y.

OR-78. Oncolytic plasmid, a novel antitumor strategy with plasmid encoding adenovirus protein
Koyama Y., Yoshihara C., Kuroda M., Tojyo M., Hamada K.

OR-79. Ocolytic adenovirus expressing a dual-function gene for imaging and treatment of pancreatic cancer
Davydova J., Trujillo M., McDonough S., Oneal M., Brown E., Han J., Vickers S., Morris J. C., Yamamoto M.

OR-80. BioKnife, a urokinase-targeted oncolytic Sendai virus, eliminates pleural spread of malignant mesothelioma
Morodomi Y., Yano T., Kinoh H., Harada Y., Saito S., Yoshida T., Ito K., Shikada Y., Maruyama R., Yoshida K., Ueda Y., Hasegawa M., Maehara Y., Yonemitsu Y.

OR-81. Development of tumor-targeting vaccinia viruses as novel oncolytic agents
Nakamura T., Hikichi M., Kidokoro M., Shida H., Tahara H.

16:00-17:00, Sub-Hall 3
Chairpersons: Masato Abei & Atsushi Watanabe

OR-82. Antitumor effect of telomerase-specific oncolytic adenovirus on human bone and soft tissue sarcoma cells
Tazawa H., Sasaki T., Hasei J., Hashimoto Y., Urata Y., Ozaki T., Fujiwara T.

OR-83. Induced microenviromental changes of targeted tumor caused by HF10 oncolytic virus therapy
Kasuya H., Gewen T., Sahin T. T., Shikano T., Yamada S., Kanzaki A., Yamamura K., Fujii T., Sugimoto H., Nomoto S., Nishikawa Y., Nishiyama Y., Takeda S., Nakao A.

OR-84. Novel oncolytic HSV-1 for prostate carcinoma exhibiting constant efficacy independent of tumor growth rate
Takeshima Y., Fukuhara H., Jiangang H., Tsurumaki Y., Homma Y., Ino Y., Todo T.

OR-85. Tumor selective replication and interferon-β sensitivity of oncolytic herpes simplex virus type 1 mutant HF10
Toshitsuna S., Chiwata E., Kohno S., Mineno J., Nishiyama Y.

OR-86. The integrin antagonist cilengitide augments antitumor efficacy of vasculostatin-expressing oncolytic viral therapy
Fujii K., Kurozumi K., Ichikawa T., Yoshida K., Onishi M., Michiue H., Chiocca E. A., Kaur B., Date I.

OR-87. Preclinical evaluation of prodrug activator gene therapy by retroviral replicating (RRV) in human and mouse glioma models

Hiraoka K., Inagaki A., LoggC. R., Kamijima S., Ostertag D., Perez O. D., Gruber H. E., Jolly D. J., Robbins J. M., Kasahara N.

Poster Session

Date: July 15, 2011, 18:20-19:20, Sub-Hall 1 & 2

☐ : Best Poster

Basic Science (Abstracts: PO88~PO95)

PO-88. Tumor growth inhibition by transduction of hepcidin-20, -22 genes
Sasaki K., Ikuta K., Tanaka H., Ichiki K., Ito S., Hosoki T., Ohtake T., Fujiya M., Torimoto Y., Kohgo Y.

PO-89. Tumor–stroma interactions reduce the efficacy of adenoviral therapy through the HGF-MET pathway
Zhao M., Yasui T., Ohuchida K., Cui L., Onimaru M., Egami T., Fujita H., Ohtsuka T., Mizumoto K., Tanaka M.

PO-90. MicroRNA-7 inhibits the stem-like properties of $CD133^+$ human gastric cancer cells
Onishi T., Tazawa H., Yano S., Hashimoto Y., Yoshida R., Kagawa S., Fujiwara T.

PO-91. Isolation nestin-positive cells from neonatal patient with hyperinsulinemic hypoglycemia of infancy
Matsumoto S., Nakamura K., Mitsubuchi H., Endo F.

PO-92. Isolation and characterization of neural stem/progenitor cells from infarct area in neonatal rat brains
Kido J., Iwai M., Matsumoto S., Tajiri H., Nakamura K., Mitsubuchi H., Endo F.

PO-93. Depletion of CD3-positive cells enables to generate purified and expanded human natural killer cells from peripheral blood mononuclear cells showing strong killer activity
Saito S., Harada Y., Yonemitsu Y.

PO-94. A new insight into the dose-response in rAAV vector integration frequency in the liver
Adachi K., Nakai H.

PO-95. Direct binding of the transcription factor, ZFP809 to the primer-binding site primed gene silencing of MoMLV type retroviral vectors
Ichida Y., Sato T., Onodera M.

Vector (Abstracts: PO96~PO99)

PO-96. Regulatory pathway for the development of advanced therapy
Shirakawa T., Endo Y.

PO-97. Replication-competent retrovirus vector-mediated prodrug activator gene therapy in experimental models of human malignant mesothelioma
Kubo S., Tamamoto A., Tamaoki T., Terada N., Maeyama Y., Okamura H., Kasahara N.

PO-98. The simple and quick analysis system based on Q-PCR using cycling probe technology for quantification of lentiviral copy numbers
Goto Y., Okamoto S., Mineno J.

PO-99. MAGE-A4 protein expression is localized in cytoplasm and inhibits exogenous apoptosis promotion
Kuroda A., Miyamoto M., Abiko T., Tsuchikawa T., Kyogoku N., Maki T., Yamamura Y., Hida Y., Kaga K., Hirano S., Ikeda H., Kageyama S., Shiku H., Kondo S.

Genetic and Other Diseases (Abstracts: PO100~PO107)

PO-100. Proposal regarding clinical genetics (genetic in medicine) education for paramedics/medical technologist in Japan
Kohzaki H.

PO-101. Protein-anchoring therapy for delivering acetylcholinesterase to the neuromuscular junction
Ito M., Suzuki Y., Okada T., Fukudome T., Yoshimura T., Masuda A., Takeda S., Krejci E., Ohno K.

PO-102. Reduction of brain damage by administration of glycine in neonatal rat brain after hypoxia-ischemia
Tajiri H., Iwai M., Matsumoto S., Nakamura K., Endo F.

PO-103. Long term enzyme activities and gene expression in neonatal lentiviral gene therapy of MPS VII mice
Ariga M., Kobayashi H., Iizuka S., Kaneshiro E., Shimizu H., Eto Y., Ida H., Ohashi T.

PO-104. Dystrophic *mdx* mice are severely compromised with cardiac and respiratory dysfunction by genetic ablation of anti-inflammatory cytokine IL-10
Nitahara-Kasahara Y., Hayashita-Kinoh H., Nishiyama A., Okada T., Takeda S.

PO-105. The evaluation of ability to induce host anti-cancer immunity of herpes oncolytic virus compared to 5-FU
Yamamura K., Kasuya H., Kanzaki A., Sahin T. T., Gewen T., Yamada S., Fujii T., Sugimoto H., Nomoto S., Takeda S., Kodera Y., Nakao A.

PO-106. AAV type 8 mediated bone-targeted and muscle directed neonatal gene therapy for hypophosphatasia
Miyake K., Matsumoto T., Miyake N., Orimo H., Fukunaga Y., Shimada T.

PO-107. Innovative technology for *in vivo* mitochondrial gene delivery using hydrodynamic limb vein injection
Yasuzaki Y., Yamada Y., Kanefuji T., Liu D., Harashima H.

Cancer (Abstracts: PO108~PO114)

PO-108. Meta-analysis of efficacy and safety of Ad-p53 and E1B 55kd region deleted adenovirus gene therapies
Endo Y., Shirakawa T.

PO-109. A single injection of AAV-8 vector expressing IL-24 efficiently suppresses tumor growth mediated by specific mechanisms in MLL/AF4-positive ALL model mice
Tamai H., Miyake K., Takatori M., Yamaguchi H., Dan K., Inokuchi K., Shimada T.

PO-110. SOCS1 gene delivery, in combination with pemetrexed and cisplatin treatment, enhances therapeutic efficacy in malignant mesothelioma
Iwahori K., Serada S., Fujimoto M., Mizuguchi H., Naka T.

PO-111. Retroviral replicating vector (RRV)-mediated prodrug activator gene therapy with codon-optimized thymidine kinase
Inagaki A., Hiraoka K., Bogan B., Logg C. R., Kamijima S., Sato M., Ostertag D., Perez O. D., Robbins J. M., Jolly D. J., Gruber H. E., Kasahara N.

PO-112. Mechanism of resistance to trastuzumab and molecular sensitization via ADCC activation by exogenous expression of HER2 extracellular domain
Yoshida R., Tazawa H., Hashimoto Y., Uno F., Nishizaki M., Kagawa S., Fujiwara T.

PO-113. The antitumor effect of combination therapy of oncolytic herpes virus hrR3 and Avastin in human gastric cancer
Tan G., Kasuya H., Sahin T. T., Shikano T., Yamada S., Kanzaki A., Yamamura K., Fuji T., Sugimoto H., Nomoto S., Nishikawa Y., Takeda S., Nakao A.

PO-114. Cytokine-based log-scale expansion of functional human dendritic cells from PBMC
Harada Y., Ueda Y., Saito S., Ichikawa T., Yonemitsu Y.