THE SEVENTH ANNUAL MEETING

2001

THE JAPAN SOCIETY OF
GENE THERAPY

PROGRAM AND ABSTRACTS

**Date**
July 5 (Thu), 6 (Fri), 7 (Sat), 2001

**Venue**
Hitotsubashi-Memory Hall

2-1-2, Hitotsubashi, Chiyoda-ku
Tokyo

GENERAL INFORMATION
Presidential Lecture

Inder M. Verma  (Chairperson; Shigetaka Asano)

Gene Therapy: Medicine of the 21st Century

Presidential Address

Tsuneya Ohno  (Chairperson; Masami Muramatsu)

Impact of the Advances in Molecular Medicine on Therapeutic Advances in Japan: The Next Decade
International Symposium of Gene Therapy (1)

**Date:** July 5, 2001  
**Time:** 13:00-15:20

**Kazunari Taira** *(Chairperson: Shoji Tsuji)*  
Intracellularly active novel hybrid-ribozymes

**Sunyong Kim** *(Chairperson: Takashi Shimada)*  
High Efficiency Retroviral Vectors that Contain No Viral Coding Sequences

**Ven Murthy** *(Chairperson: Jun Yoshida,)*  
Apolipoprotein E-mediated Transfection and Expression of Human Low Density Lipoprotein Receptor Transgene into Hepatocytes

**Thomas J Wickham** *(Chairperson: Izumu Saito)*  
Genetically Retargeted Adenovirus Vectors for Human Gene Therapy

**Xi-Zhang Lin** *(Chairperson: Yoshikatsu Eto)*  
Hydrodynamics-based transfection of naked DNA into the liver through the bile duct

International Symposium of Gene Therapy (2)

**Date:** July 7, 2001  
**Time:** 13:30-15:50

**Matthew J. During** *(Chairperson: Nagahiro Saijo)*  
Peroral Transduction of Neuroendocrine Cells and Hepatocytes with an AAV Insulin Vector leading to Euglycemia in Diabetic Rats.

**Suthat Fucharoen** *(Chairperson: Keiya Ozawa)*  
Antisense and Gene Therapy for Thalassemia

**Steve Wilton** *(Chairperson: Yasufumi Kaneda)*  
The Application of Antisense Oligonucleotides in a "Gene Knock-In" Therapy for Duchenne Muscular Dystrophy

**Dale Ando** *(Chairperson: Kenzaburo Tani)*  
Phase I/II study of Autologous GM-CSF Gene-modified Cancer Vaccines in subjects with Non-Small Cell Lung Cancer (NSCLC)

PhaseII Trials of a GM-CSF Gene-Transduced Prostate Cancer Cell Line Vaccine(GVAX®) Demonstrate Anti-Tumor Activity

**Michael Perricone** *(Chairperson: Yutaka Kawakami)*  
Immunotherapy for Melanoma Using Gene Therapy Vectors Encoding Melanoma-Associated Antigens
Plenary Session (Abstracts #1~8)  

Day 1: July 5, 2001

New Approach & Preclinical Studies (15:30-16:50)

Chairperson: Hiromitsu Nakauchi and Yoshikazu Sugimoto

1 Stable γ Globin Expression by Retrovirus Vector Using Chromatin Insulator

Nishino T., Yannaki E., Tubb J., Stamatoyannopoulos G., and Emery DW.

2 Fiber-modified Adenovirus Vectors for Gene Therapy -Enhanced Anti-Tumor Effects and Reduced Side Effects Obtained Using Fiber-Modified Adenovirus Vectors Expressing HSVtk and the Development of a System for Targeting Adenovirus Vectors-

Mizuguchi H., and Hayakawa T.

3 Behavioral Recovery in a Primate Model of Parkinson's Disease by Triple Transduction of Striatal Cells with AAV Vectors Expressing Dopamine-Synthesizing Enzymes


4 In vivo Selective Expansion of Retrovirally Transduced Hematopoietic Cells in the Setting of a Clinically Applicable Nonhuman Primate Transplantation Protocol


Clinical Studies (17:00-18:20)

Chairperson: Hideaki Tahara and Hiromi Kumon

5 A Proposed rAAV-Liver Directed Clinical Trial for Hemophilia B


6 A Clinical Study of MDR1 Gene Therapy against Breast Cancer


7 Phase I/II Study of Adenoviral Vector Delivery of HSV-TK Gene and the Intravenous Administration of Ganciclovir in Men with Local Recurrence of Prostate Cancer after Hormonal...
Therapy - A Report of the First Case -

Clinical Studies of Immunogene Therapy Using Autologous GM-CSF Transduced Tumor Vaccines (GVAX) for Stage IV Renal Cell Cancer: Progress Report

Oral Session 1 (Abstracts #9~15)
Day 2: July 6, 2001

Cancer Gene Therapy (9:30-10:30)
Chairperson: Yoshiro Niitsu, and Takenori Ochiai

Improvement of Carcinoembryonic Antigen-Specific Suicide Gene Therapy in the Orthotopic Colon Cancer Model with Liver Metastases
Ueda K., Iwahashi M., Nakamori M., Nakamura M., Matsuura I., and Yamaue H.

Prolonged Survival of Mutiple Liver Metastases Model Mice by Intravenous Administration of Oncolytic Adenovirus with CEA Promoter Controlled E1A and 55K-Deleted E1B
Sagawa T., Takahashi M., Sumiyoshi T., Sato T., Sato Y., Iyama S., Fukaura J., Yamada Y., Okamoto T, Oku T., and Niitsu Y.

E1A Gene Therapy for Treatment of Local and Metastatic Cancer

Diagnosis and Treatment of Esophageal Cancer through p53 Molecule as a Target
Shimada H., Matsubara H., Gunji Y., and Ochiai T.

Cancer Gene Therapy: New Approach (10:30-11:15)
Chairperson: Noriyuki Kasahara and Osam Mazda

Development of Novel Vectors for Anti-Angiogenic Gene Therapy of Cancer
Shichinohe T., Logg CR., Soifer H., Tai CK., Logg A., Cannon PM., Anderson WF., and Kasahara N.
Hydrodynamics-Based Immuno-Gene Therapy of Cancer
Itokawa Y., Ueda Y., Fuji N., Cui F., Asada H., Kishida T., Satoh E., Hirai H., Fujiwara H., Imanishi J., Yamagishi H., and Mazda O.

Potential Applicability of Tumor-Targeting Peptide Vector and RNA Interference for Cancer Gene Therapy
Aoki Y., Cioca DP., Kamiya J., and Kiyosawa K.

Oral Session 2 (Abstracts #16~24)

Day 2: July 6, 2001

Gene Therapy of Congenital Disorders (14:50-15:40)
Chairperson: Yukio Sakiyama and Torayuki Okuyama

Development of AAV Vector Mediated Enzyme Replacement Therapy for Fabry Disease

Feasibility Study Using SCID Repopulating Cells in Hematopoietic Stem Cell Gene Therapy for Adenosine Deaminase Deficiency
Yoshida J., Ichimura T., Onodera M., Kaneko S., Ariga T., and Sakiyama Y.

Rapid and Long-Term Pathological Correction of Corneal Clouding in Mice with Mucopolysaccharidosis Type VII Using Novel Vector Administration Procedure "Lamellar Keratotomy"

Recombinant Sendai Virus-Mediated Gene Transfer into Retinal Tissue of Adult Rats

Improved Exon Skipping in the MDX Mouse Model of DMD by Refining the Design of Antisense Oligonucleotides
Mann C., Honeyman K., Fletcher S., Lloyd F., and Wilton S.

Gene Therapy of Acquired Disorders (15:50-16:50)
Chairperson: Akihiro Kume and Fumio Endo

AAV Vector-Mediated Delivery of GDNF Gene in the Striatum Rescues Dopaminergic Neuron
Degeneration and Ameliorates Behavioral Impairment in a Rat Model of Parkinson's Disease

Cardio-Protective Effect of HGF Gene Transfer into Myocardium of Cardiomyopathic Hamster (Bio 14.6) : Novel Gene Therapy Strategy for Cardiomyopathy
Hashiya N, Aoki M, Taniyama Y, Yamasaki K, Makino H, Morishita R, Kaneda Y, and Ogihara T.

Combination Gene Therapy of Angiopoietin-1 with VEGF for Critical Limb Ischemia
Yamauchi A., Ito Y., Morikawa M., Huang J.H., Abe T., and Hamada H.

Preliminary Results from Japan Trial to Prevent Restenosis after Angioplasty or Stent Using E2F Decoy ODN as Gene Therapy (J-PRAS)
Makino H., Aoki M., Yamasaki K., Hashiya N., Shimizu H., Morishita R., Kaneda Y., and Ogihara T.

Oral Session 3 (Abstracts #25~36)
Day 3: July 7, 2001

Gene Therapy Targeting Hematopoietic Stem Cells (9:30-10:30)
Chairperson: Masatoshi Tagawa and Mamoru Hasegawa

Reversible Transduction of Hematopoietic Stem/Progenitor Cells with a Differentiation-blocking Gene for Their ex vivo Expansion
Muramatsu M., Hanazono Y., Ogasawara Y., Okada T., Mizukami H., Kume A., Mizoguchi H., and Ozawa K.

In vivo Expansion of Transduced Murine Hematopoietic Cells with Selective Amplifier Genes

Establishment of the Efficient Gene Transfer System into Murine Hematopoietic Stem Cells Using a VSV-G Pseudo-type Retroviral Vector GCDNsap(MSCV)
Kaneko S, Onodera M, Kaneda M, Nagawasa T, and Nakauchi H.

Genetic Engineering of CD34+ Hematopoietic Stem/Progenitor Cell-Derived Dendritic Cells Using a Lentiviral Vector
Lentivirus Vector (10:30-11:30)

Chairperson: Nobuhiko Emi and Mahito Nakanishi

29 Gene Transfer to Human Leukemia Cells, Lymphocytes and Hematopoietic Stem Cells with the Third Generation Lentiviral Vector
Soda Y., Bai Y., Izawa K., Sasaki E., Nakazaki Y., Tanabe T., Iseki T., Tojo A., Miyoshi H., Tani K., and Asano S.

30 High-Level and Long-Term Transgene Expression in Cynomolgus Monkey Embryonic Stem Cells with a Simian Immunodeficiency Virus Vector

31 Production of High-Titer Lentiviral Vectors Using Adenovirus-HIV Hybrid Expression Vectors
Miyake K., Suzuki N., Shimada T.

32 Pseudotyping of SIVagm-Based Lentiviral Vectors with Envelope Proteins from Paramyxovirus
Kobayashi M., Huang K., Iida A., and Hasegawa M.

Sendai Virus & Adenovirus (11:30-12:30)

Chairperson: Shinichi Miyatake and Takao Hayakawa

33 Persistent Expression of the Gene Transferred by Sendai Virus Vector
Tokito F., Ueda Y., Nagai Y., and Hasegawa M.

34 Development of a Novel Type of Sendai Virus Vector Lacking All of the Envelope Glycoprotein Genes

35 Adenovirus Vectors Containing Chimeric Type 5 and Type 35 Fiber Proteins Exhibit Expanded Tropism and Increase the Size Limit of Foreign Genes
Mizuguchi H., and Hayakawa T.

36 Single Adenovirus Vector Containing a Tetracycline-Controllable Expression System Allows Regulated Transgene Expression in vitro and in vivo -Tet-Off System Shows Higher Regulation Than Tet-On System-
Mizuguchi H., and Hayakawa T.

Oral Session 4 (Abstracts #37~40)
Day 3: July 7, 2001

**Novel Approach to Gene Therapy (16:00-17:00)**

*Chairperson: Hisamaru Hirai, and Toya Ohashi*

37 **Identification of Intermediates for rAAV Vector Genome Concatemerization and Integration in Hepatocytes in vivo: Evidence for Double-Stranded Linear Monomer Genomes not Circles as Reactive Intermediates**

Nakai H., Fuess S., Storm TA., Meuse L., and Kay MA.

38 **MR Imaging of Transgene Expression from a HSV-1 Amplicon Vector**

Kanbara H., Ichikawa T., Hoegemann D., Saeki Y., Weissleder R., Chiocca EA., Basilion JP., Tamiya T., and Ohmoto T.

39 **Human Proteins Responsible for Mitochondrial Fusion**

Endo H., Ueno E., Hamamoto T., and Kagawa Y.

40 **Design Considerations, Manufacturing, and Analytical Aspects of DNA-Based Gene Therapeutics**

Breul A.

---

**Poster Session 1 (Abstracts #41~86)**

Day 2: July 6, 2001 (17:00-18:30)

**Gene Targeting for Aquired Disease**

99 P2-01 Sendai Virus Mediated Gene Transfer of Glial Cell Line-Derived Neurotrophic Factor Rescues from Ischemic Brain Injury in Gerbils


76 P2-02 Contribution of Microglia / Macrophages to Expansion of Focal Cerebral Ischemia Using GFP Bone Marrow Transplantation Mice

Urabe T., Tanaka R., Mochizuki H., Migita M., Shimada T., and Mizuno Y.

77 P2-03 Intracranial Transplantation of Bone Marrow Stromal Cells from Transgenic Mice Expressing Enhanced Green Fluorescent Protein

Tanaka R., Mochizuki H., Urabe T., Yamada M., Migita M., Shimada T., and Mizuno Y.

78 P2-04 Intracerebral Grafting of Genetically Modified Progenitor Cell Using High-Titer Pseudo-Typed Retrovirus Vector
Suzuki A., Mochizuki H., Obi K., Urabe T., Onodera M., and Mizuno Y.

79 P2-05 Contribution of Microglia / Macrophage Accumulation and Dopaminergic Cell Death Using MPTP-Treated EGFP Bone Marrow Transplantation Mice
Furuya T., Mochizuki H., Hayakawa H., Migita M., Shimada T., and Mizuno Y.

75 P2-06 Anti-Apoptotic Gene Therapy in Parkinson's Disease
Mochizuki H., Hayakawa H., Migita M., Miura M., Shimada T., and Mizuno Y.

28 P2-07 P21 Gene Transfer into Rheumatoid synovitis Suppressed the Articular Cartilage Degradation
Tomita T., Takahi K., Tomita N., Morishita R., Nakase T., Kaneda Y., and Yoshikawa H.

117P2-08 Angiostatic Gene Therapy of Rheumatoid Arthritis

118P2-09 Gene Transfer into Synovium by Electroporation in vivo

84 P2-10 Cell Therapy for Diabetes with Genetically Engineered Preadipocytes
Yamasaki K., Sasaki T., Nemoto M., Fujimoto K., Sakai K., Eto Y., and Tajima N.

72 P2-11 HST-1/FGF-4 Serves as a New Paradigm for Gene Therapy Applications to Testicular Damage
Hirai K., Ochiya T., Yamamoto H., Sasaki H., Sakamoto H., Kubota Y., Kakizoe T., and Terada M.

49 P2-12 Introduction of DNA Enzyme for Egr-1 into Tubulointerstitial Fibroblasts by Electroporation Reduced Interstitial \( \alpha \)-Smooth Muscle Actin Expression and Fibrotic Changes in Unilateral Ureteral Obstruction Rats
Isaka Y., Nakamura H., Tsujie M., Imai E., and Hori M.

92 P2-13 Gene Therapy of Bone Defects Using Genetically Modified Primary Bone Marrow Stromal Cells
Sugiyama O., Orimo H., Suzuki S., and Shimada T.

126P2-14 Development of a DNA Vaccine against B Virus : Its Evaluation in Japanese Monkeys
Hirano M., Nakamura S., Mitsunaga F., Okada M., Shimizu K., Bennett A., and Eberle R.

18 P2-15 Anti-Pseudomonas Vaccine Using Dendritic Cells Expressing Macrophage-Derived Chemokine
Kikuchi T., and Crystal R.G.

Development of New Viral Vectors

100P2-16 A New Design of Selective Amplifier Genes with an Erythropoietin Receptor-Based Molecular Switch for Controlled Expansion of Gene-Modified Hematopoietic Cells
Nagashima T., Ueda Y., Hanazono Y., Kume A., Shibata H., Ageyama N., Komatsu N., Terao K., Ozawa K., and Hasegawa M.

95 P2-17 Improvement of Retrovirus-Mediated Gene Transfer into Tumor Cells

55 P2-18 Reversible and Irreversible Silencing of Retrovectors in vivo

- 7 -
Inada T., Furuta R.A., and Fujisawa J.

30 P2-19 Two Elements in the Upstream Control Region of the SFFVp LTR Cooperatively Regulate the Efficient Retroviral Expression in Hepatocytes and Hematopoietic Cells
Ohnishi N., Itoh K., Itoh Y., Okanoue T., and Fujita J.

47 P2-20 The Retroviral Vector GCsap with Murine Stem Cell Virus LTR Allows High and Continued Expression of the Transgene by Human Peripheral T Lymphocytes Engrafted in Non-Obese Diabetic/Severe Combined Immunodeficiency Mice
Kaneko S., Onodera M., Kaneda M., Nagawasa T., and Nakauchi H.

9 P2-21 Modification of the Host Range Property of the Ecotropic MLV Vector by Insertion of a Peptide Ligand into the VRA of Envelope Protein
Katane M., Takao E., Kubo Y., and Amanuma H.

54 P2-22 Removal of Inhibitory Substances by Using Recombinant Fibronectin CH-296 Plates Enhances Retroviral Transduction Efficiency of CD34⁺CD38⁻ Bone Marrow Cells

122 P2-23 Inhibitory Effect of Central Polypurine Tract on Titers of HIV-1 Vectors
Sakuma R., Kobayashi N., Ae K., and Kitamura Y.

83 P2-24 Successful in situ Delivery of Sendai Virus-Based Vectors to Rat Parenchymal Hepatocytes by Isolated Hepatic Perfusion
Fujita S., Eguchi A., Inoue Y., Ito T., Matsuda H., Hasegawa M., and Nakanishi M.

44 P2-25 Efficient Adenovirus Vector-Mediated Gene Transfer to Dog Liver by Liver Asanguineous Perfusion
Takeuchi K., Okamoto T., Shiba H., Futagawa Y., Nakamura J., Takeda A., Aoki T., Ohashi T., and Eto Y.

51 P2-26 Efficient Repetitive Gene Delivery to Skeletal Muscle Using Recombinant Adenovirus Vector Containing the Coxsackievirus and Adenovirus Receptor cDNA
Kimura E., Maeda Y., Arima T., Yamashita S., Nishida Y., Uchida Y., and Uchino M.

33 P2-27 Stability of Adenovirus Vector during Transport and Delivery by the Manufacturer

64 P2-28 Detection of Single-Mutation of Human P53-Recombinant Adenovirus in 293 Cells by Taqman Assay

116 P2-29 Production of Recombinant Adenovirus (rAd) Carrying All Genome of Adeno-Associated Virus Type 2 (AAV) in the Antisense - Rep Expressed 293 Cells
Hirai Y., Takahashi H., Takahashi K., and Shimada T.

113 P2-30 Adeno-Associated Virus Type3-Based Vector Efficiently Transduces Both Slow and Fast Muscle Fibers
Yoshimura M., Muramatsu S., Mizukami H., Kanazawa I., Nakano I., and Ozawa K.

106 P2-31 A Novel Packaging Cell Line for Adeno-Associated Virus Vector Production Based on Simultaneous Induction of Rep and Cap Expression Mediated by Mutant and Wild-Type loxP Sequences with Cre Recombinase
Mizukami H., Okada T., Mochizuki S., Ogasawara Y., Matsushita T., Urabe M., Hanazono Y., Kume A., and Ozawa K.

Development and Characterization of an Antisense-Mediated Regulation System for Adeno-Associated Virus Vector Production with Introduction of Cre Recombinase
Okada T., Mizukami H., Urabe M., Matsushita T., Hanazono Y., Kume A., Tobita K., and Ozawa K.

Rescue of a Recombinant AAV Vector from the Vector-Transduced HeLa Cells
Mori S., Takeuchi T., and Kanda T.

Episomal Recombinant Adeno-Associated Virus Vector Genomes are Primarily Responsible for Stable Liver Transduction in vivo

Successful Transduction of Mammalian Astrocytes and Oligodendrocytes by “Pseudotype” Baculovirus Vector
Kobayashi H., Watabe K., Tani H., Matsuura Y., Barsoum J., Ohashi T., and Eto Y.

Development of Nonviral Vectors

Development of a Novel Gene Transfer Method to the Kidney Based on HVJ-Immunoliposome
Tomita N., Morishita R., Higaki J., Oghara T., and Kaneda Y.

Cellular and Molecular Dynamics of Cationic Liposomes in Human Glioma Cells
Nobayashi M., Mizuno M., Okamoto K., Tsugawa T., and Yoshida J.

An Improved Polyethylenemine (PEI)/DNA Vector Formulation that Exhibits Highly Efficient in vitro and in vivo Gene Delivery
Yamashita M.

Conformational Change of DNA by Use of Aluminium Hydroxide
Matauzawa Y., and Emi N.

Molecular Study of Oligonucleotide-Mediated Gene Repair
Ikejima M., Nakajima E., Watanabe A., and Shimada T.

Development and Manufacturing of Plasmid DNA Based Drugs
Müller M.

Simple Method of Extraction and Purification for High Purity and Large Scale of Plasmid DNA～TFF (Tangenital Flow Filtration) System
Ishida A., Sekiguchi K., Yasuzumi F., Arakaki S., and Nagamine M.

Atelocollagen-Based Gene Delivery System : Biophysical Characteristics and Transfection Ability in vitro
High Efficiency of Gene Transfer to Renal Cell Carcinoma Cells by Using in vitro Electroporation

Advanced Gene Expression into Fetal Mouse Skin by Intrauterine Gene Transfer Using Microbubble-Enhanced Ultrasound
Endoh M.P., Morishita R., and Kaneda Y.

Development of Ultrasound Device for Gene Delivery
Manome Y., Furuhata H., and Ohno T.

Poster Session 2 (Abstracts #87~136)
Day 3: July 7, 2001 (17:10-18:40)

Cancer Gene Therapy

Efficient Cancer-Selective Gene Transfer to Hepatocellular Carcinoma in a Rat Model Using Adenovirus Vector with Tumor Embolic Agents
Shiba H., Okamoto T., Futagawa Y., Nakamura J., Takeuchi K., Takeda A., Aoki T., Ohashi T., and Eto Y.

Recombinant Immunogene Approach Using Humanized Single Chain Antibody
Suzuki M., Takayanagi A., Chen J., and Shimizu N.

Tumor-Targeted Gene Delivery by Fiber-Mutant Adenoviral Vectors
Nakamura T., Kawano Y., Ito Y., Sato K., and Hamada H.

Gene Therapy Targeting for Hepatocellular Carcinoma: Selective and Enhanced Gene Expression Regulated by a Hypoxia-Inducible Enhancer Linked to α-Fetoprotein Promoter
Ido A., and Tsubouchi H.

Development of Gene Therapy for Hormone-Refractory Prostate Cancer
Furuhata S., Ide H., Iwamoto T., Yoshida T., and Aoki K.

Glioma-Specific p53 Gene Expression by Adenovirus Vector
Kurihara H., and Takeuchi T.

Transcriptional Activation of the Thyroglobulin Promoter Directing Suicide Gene Expression by Thyroid Transcription Factor-1 in thyroid Cancer Cells

Suppression of Mammary Carcinoma Growth in vivo by Electro-Gene Therapy Using HSV-tk/GCV System
Shibata M., Morimoto J., and Otsuki Y.

Enhancement of Suicide Cancer Gene Therapy Using a Novel Histone Deacetylase Inhibitor
FR901228
Yamamoto S., Takao S., Morishita R., Aikou T., and Kaneda Y.

131 P3-10 Experimental Gene Therapy for Prostate Cancer Cell Line DU145 Using Adenovirus-Mediated Transfer of Cytosine Deaminase Gene and Uracil Phosphoribosyltransferase Gene with 5-Fluorocytosine

132 P3-11 Chemosensitizing Gene Therapy for Bladder Cancer Using Adenovirus-Mediated Transfer of Uracil Phosphoribosyl Transferase Gene with 5-Fluorouracil
Kaku H., Nasu Y., Ebara S., Tsushima T., and Kumon H.

112 P3-12 Gamma Ray Irradiation Combined with AAV-Mediated Suicide Gene Therapy Results in Regression of Human Head and Neck Cancer Xenografts

63 P3-13 Induction of Antitumor Immunity Using a Replication-Conditional HSV Mutant for the Treatment of Liver Metastasis

135 P3-14 Polyvalent DNA Vaccination Using in vivo Electroporation System

86 P3-15 Anti-Tumor Immunity Induced by ex vivo Retrovirus Vector-Mediated Expression of CD40 Ligand Against Bladder Cancer
Kimura T., Ohashi T., Kiyota H., Eto Y., and Ohishi Y.

29 P3-16 Cancer Vaccine Therapy Using Dendritic Cells (DCs) Adenovirally Transduced with the Tumor Antigen Gene - Comparative Analysis to DCs Pulsed with the Immunodominant Peptide
Nakamura M., Iwahashi M., Nakamori M., Ueda K., Matuura I., Ojima T., and Yamaue H.

46 P3-17 Transfusion of Donor Lymphocytes Transduced with the Herpes Simplex Thymidine Kinase Gene into the Patients with Relapsed Leukemia after Allogeneic Hematopoietic Stem Cell Transplantation

24 P3-18 Expression of Membrane-Type Fas Ligand on Murine Lung Carcinoma Cells Induces T-Cell Dependent and Independent Anti-Tumor Immunity in Inoculated Hosts

23 P3-19 Novel Immunotherapy for Peritoneal Dissemination of Murine Colon Cancer with Macrophage Inflammatory Protein-1 (β) Mediated by a Tumor-Specific Vector, HVJ-Cationic Liposomes
Miyata T., Yamamoto S., Sakamoto K., Morishita R., and Kaneda Y.

20 P3-20 Adenovirus-Mediated Interleukin-2 Gene Transduction only into the Primary Tumor Inhibits Lung Metastasis of Osteosarcoma: Direct Evidence in Animal Models Reflecting Clinical Pathology

37 P3-21 Immuno-Gene Therapy Using IL-12 Transduced Fibroblasts in Murine Liver Metastasis Models

- 11 -
Su W., Ito T., Kitagawa T., Oyama T., and Matsuda H.

82 P3-22 Significant Anti-Tumor Effects Obtained by Autologous Tumor Cell Vaccine Engineered to Secreted IL-12 and IL-18 by Means of the EBV / Lipoplex
Asada H., Kishida T., Satoh E., Hirai H., Imanishi J., and Mazda O.

123 P3-23 Immunogene Therapy against Melanoma by in vivo Electroporation
Kishida T., Asada H., Satoh E., Shinya M., Hirai H., Imanishi J., and Mazda O.

56 P3-24 Growth Inhibition of Established Metastatic Tumors in Lung by Intravenous Interferon-β Gene Delivery
Sakurai F., Terada T., Watanabe Y., Yamashita F., Takakura Y., and Hashida M.

81 P3-25 Apoptosis Induction into Tumor Cells by the Interferon (IFN)-β Gene Transfer via the EBV / Polyplex
Shinya M., Hirai H., Satoh E., Imanishi J., and Mazda O.

111 P3-26 Interleukin-10 Inhibits Angiogenesis and Tumor Growth in Nude Mice Bearing VEGF-Producing Ovarian Cancer

136 P3-27 Anti- and Angiogenic Gene Expressions in the Antitumor BAI-1 Gene Therapy
Kang X-X, Tani K., Nakamura Y., and Asano S.

21 P3-28 Adenoviral HGF Gene Transduction Inhibits Hepatoma in vitro

120 P3-29 Adenovirus Mediated ICAM-2 Gene Therapy for the Peritoneal Metastasis of Scirrhous Gastric Carcinoma
Tanaka H., Yashiro M., Sunami T., and Hirakawa K.

98 P3-30 Tob, a Novel Anti-Proliferative Tob / BTG2 Family Member, Drastically Suppress Tumor Growth in p53 Wild Human Lung Carcinoma Cells in vitro and in vivo, Sparing Damage to Normal Cells
Kunisaki R., Tani K., Matsuda S., Harata M., Shuto Y., Bai Y., Tanabe T., Sekihara H., and Asano S.

108 P3-31 Radio-Gene Therapy for Human Colon Cancer Cells (HT29) by the Inhibition of Nuclear Factor Kappa B (NF-κ B) Using Adenovirus-Mediated Gene Transduction of 1κBα

80 P3-32 Anti-tumor Activity and Bystander Effects of the Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand (TRAIL) Gene
Kagawa S., Fang B., Roth J.A., Kataoka M., Fujiwara T., and Tanaka N.

130 P3-33 Apoptosis by Adenovirus-Mediated Gene Transfer of FADD to Prostate Cancer Cells in vitro and in vivo: Implications for Gene Therapy
Konaka H., Koshida K., Miyagi T., Kitagawa Y., Hori O., Ogawa S., Hamada H., and Namiki M.

68 P3-34 Pore Forming Domain of Bax (Delta N Bax without BH3 Domain) Effectively Induces Cell Death in Non-Small Cell Lung Cancer
Slight Increase of Serum Ceruloplasmin via Somatic Hepatocyte Transplantation is Sufficient to Improve the Prognosis of Rat Model of Wilson's Disease

Ohta R., Yonemitsu Y., Shoji F., Nakagawa K., Shimada M., Sugimachi K., and Sueishi K.

**Gene Therapy for Congenital Disease**

A Novel Calnexin Homologue Rescues Misprocessing of ΔF508 CFTR Present in Most Patients with Cystic Fibrosis

Okiyoneda T., and Kai H.

Engraftment of Genetically-Engineered Amniotic Epithelial Cells Corrects Lysosomal Storage in Multiple Areas of the Brain in Mucopolysaccharidosis Type VII Mice


Primary Neuronal Cell Survival Using Adenoviral Vectors with Bcl-2 and Cre Recombinase and their Use in Gene Expression by Retrograde Transport in Mutant SOD1 Transgenic Mice

Yamashita S., Mita S., Arima T., Maeda Y., Kimura E., Nishida Y., Okado H., and Uchino M.

Intraventricular Administration of Recombinant Adenovirus to Neonatal Twitcher Mouse Leads to Significant Clinico-Pathological Improvements

Shen J., Watabe K., Ohashi T., and Eto Y.

Administration of Interleukin-6 Up-Regulates the Sarcolemmal Utrophin Expression in Neonatal mdx Skeletal Muscle

Fujimori K., Yamamoto K., Miyagoe-Suzuki Y., Itoh Y., Yuasa K., Hosaka Y., and Takeda S.

Enhanced Immune Response Inhibits Long-Term Expression of Transferred Gene Products in Adeno-Associated Virus (AAV) Vector-Mediated Gene Transfer into Dystrophin-Deficient mdx Skeletal Muscle

Yuasa K., Sakamoto M., Miyagoe-Suzuki Y., Tanouchi A., Li J., Xiao X., and Takeda S.

Cryptic Splicing Involving the Splice Site Mutation in the Canine Model of Duchenne Muscular Dystrophy

Fletcher S., Mann C, Ly T., Duff R., Howell J., and Wilton S.

**Gene Therapy for Vascular Disease**

Co- and Pre-Treatment with Proteases and Sendai Virus Vector Enhances the Efficiency of Gene Transfer to the Rat Arterial Media

Kinoh H., Ueda Y., Yonemitsu Y., Sueishi K., and Hasegawa M.

Specific Gene Expression System for Vascular Smooth Muscle Cells

Hiranuma T., Watanabe A., Mizuguchi H., Hayakawa T., Matsukura M., Miike T., and Shimada T.
5  P3-45  Adenovirus-Mediated ex vivo Gene Transfer of Basic Fibroblast Growth Factor for Therapeutic Angiogenesis
Koyama H., Ohara N., Miyata T., and Shigematsu H.

6  P3-46  Co-Transfection of Human Prostacyclin Synthase (PGIS) Gene with Hepatocyte Growth Factor (HGF) Exaggerated Collateral Formation in Ischemic Hindlimb Mouse Model
Koike H., Morishita R., Taniyama Y., Tanabe T., and Kaneda Y.

13  P3-47  Highly Efficient Intramuscular Gene Transfer Using Sendai Virus Vector: VEGF is Necessary, but Seriously Toxic without FGF-2 to Treat Critical Limb Ischemia

1  P3-48  Endothelial Nitric Oxide Synthase and not Superoxide Dismutase ex vivo Gene Transfer to the Atherosclerotic Rabbit Aorta Improves Endothelial Function
Sato J.

66  P3-49  The Possibility for Gene Therapy for Abdominal Aortic Aneurysm (AAA) Using Double (Chimera) Decoy Strategy
Nakashima H., Aoki M., Ogihara T., Kaneda Y., and Morishita R.

62  P3-50  Effect of NFkB Decoy on Neointimal Formation in Porcine Balloon Injury Model: A New Decoy Strategy for Restenosis after PTCA as Pre-Clinical Study
Yamasaki K., Asai T., Morishita R., Kaneda Y., and Ogihara T.