THE 10th ANNUAL MEETING

2004

JAPAN SOCIETY OF GENE THERAPY

PROGRAM AND ABSTRACTS

Date

August 5-6, 2004

Venue

Hitotsubashi Memorial Hall

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

JSGT Home Page URL: http://jsgt.jp

PROGRAM OF THE 10TH JSGT ANNUAL MEETING – 2004

{ }:Chairpersons

August 4, Wednesday	
17:00 - 17:50	*MANAGERS' MEETING
18:00 - 18:40	*DIRECTORS' MEETING
18:50 - 19:30	*COUNCILORS' MEETING

August 5, Thursday (Day-1)	
8:30-17:00	**Registration**
9:30-10:45	**Oral Session 1** **Cancer** {K. Tani, N. Tanaka} Abstrats 1-5
10:45-11:30	**Cardiovascular Diseases** {Y. Sawa, M. Itakura} Abstracts 6-8
11:30-12:30	**Congenital Diseases** {A. Gotoh, T. Okuyama } Abstrats 9-12
12:30-13:00	**Presidential Remarks** **& General Assembly** {I. Matsuda}
13:00-14:00	**Lunch**
14:00-15:00	**Oral session 2** **Neurological Diseases** {F. Endo, T. Ohashi} Abstracts 13-16
15:00-16:00	**Stem Cells** {O. Mazda, H. Nakauchi} Abstracts 17-20
16:10-17:50	**Poster Session 1** RNA Virus Vectors (33-47) AAA Vectors (48-55) Acquired Diseases (56-63)

August 6, Friday (Day-2)	
9:00-17:00	**Registration**
9:30-10:30	**Oral Session 3** **Cell and Gene Targting** {Y. Niitsu, T. Todo} Abstrats 21-24
10:30-11:30	**Vector Development – I** {I. Saito, T. Shimada} Abstracts 25-28
11:30-12:30	**Vector development – II** {H. Tahara, H. Hamada} Abstrats 29-32
12:30-13:30	**Lunch**
13:30-15:00	**Poster Session 2** DNA Virus Vectors (64-79) Nonviral Vectors (80-86) Cancer Gene Therapy (87-97)
15:00-18:00	**JSGT & MBH Joint Symposium** **"Gene Therapy"** {K. Ozawa, Y. Kaneda}
	Closing Remarks **Ichiro Matsuda**
19:00-21:00	**JSGT & MBH Joint Reception** (at a Japanese Houseboat)

(Adstract No. = Acceptance No.)

JSGT and MBH (Molecular Biology of Hematopoiesis)
Joint Symposium : Gene Therapy

Date: August 6, 2004

Time: 15:00-18:00

Chairpersons: Keiya Ozawa, Yasufumi Kaneda

Kristen Hege

A Phase 1/2 Trial of Intravenous CG7870, a Replication-Selective, PSA-Targeted Oncolytic Adenovirus, for the Treatment of Hormone-Refractory, Metastatic Prostate Cancer

Theodore Friedmann

Stefan Karlsson

Development of Gene Therapy for Diamond-Blackfan Anemia

John Rasko

Results from a Phase I Study of AAV-Mediated, Liver-Directed Gene Transfer for Hemophilia B

PROGRAM
Oral Session 1 (Abstract 1-12)

Day 1: August 5, 2004

Cancer 9:30 - 10:45

Chairpersons: Kenzaburo Tani, Noriaki Tanaka

1. **Analysis of Retroviral Vector Integration into the Genome of Long –Term Repopulating Cells of the MDR1 Gene Therapy Patient**
   Sugimoto Y., Mitsuhashi J., Suzuki R., Tsukahara S., Minowa S., Nagamine T., Shibata H., Ito Y., Tsuruo T., Hatake K., Takahashi S.
2. **Phase I/II Clinical Trial of Ad-OC-TK plus VAL for the Patients with Metastatic or Local Recurrent Prostate Cancer : Initial Experience in Kobe University**
   Shirakawa T., Hinata N., Terao S., Taniguchi N., Sugimura K., Matsuo M., Maeda S., Kamidono S., Gotoh A.
3. **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**
   Nasu Y., Ebara S., Kaku H., Saika T., Thompson TC., Kumon H.
4. **Detection of Enhanced Serum Antibody Production to Renal Cell Cancer Proteins and Identification of Serological Tumor Antigens in Patients Treated with the GM-CSF-Gene Transduced-Autologous Tumor Vaccines (GVAX®)**
   Hashiguchi T., Nakazaki Y., Clift S., Ando DG., Asano S., Tani K.
5. **Enhancement of Anticancer Effect of Cisplatin by The Delivery Of Rad51 siRNA using HVJ Envelope Vector**
   Yamamoto S., Kaneda Y.

Cardiovascular Disease 10:45 – 11:30

Chairpersons: Yoshiki Sawa, Mitsuo Itakura

6. **Adeno-Associated Virus Vector-Mediated Intramuscular Delivery of Interleukin-10 Gene Prevents the Development of Hypertensive Heart Disease in Dahl Salt-Sensitive Rats**
   Sarukawa M., Okada T., Yoshioka T., Nomoto T., Ito T., Maeda Y., Mizukami H., Matsushita T., Kume A., Yamamoto K., Ikeda U., Shimada K., Ozawa K.

7. **Subretinal Expression of Soluble Flt-1 Using AAV5 Vector Prevents Diabetic Retinopathy in a Spontaneously Diabetic Rat Model**

   Ideno J., Mizukami H., Kakehashi A., Saito Y., Okada T., Kume A., Kuroki M., Kawakami M., Ishibashi S., Ozawa K.

8. **Blockade of Vascular Endothelial Growth Factor Suppresses Experimental Restenosis after Intraluminal Injury by Inhibiting Recruitment of Monocytes and Bone Marrow-Derived Progenitor Cells**

   Ohtani K., Hiasa K., Kitamoto S., Ishibashi M., Sata M., Shibuya M., Takeshita A., Egashira K.

Congenital Disorders 11:30 – 12:30

Chairpersons: Akinobu Gotoh, Torayuki Okuyama

9. **A Clinical Trial of Retroviral-Mediated Gene Transfer to Bone Marrow CD34+ Cells as a Treatment of Adenosine Deaminase-Deficiency**

   Otsu M., Ariga T., Maeyama Y., Nakajima S., Yoshida J., Kida M., Toita N., Hatano N., Kawamura N., Okano M., Kobayashi R., Tatsuzawa O., Onodera M., Candotti F., Kobayashi K., Sakiyama Y.

10. **An AAV Vector-Mediated Micro-Dystrophin Expression in Relatively Small Percentage of Dystrophin-Deficient MDX Myofibers Still Improved the MDX Phenotype through Compensatory Hypertrophy**

    Ikemoto M., Yoshimura M., Sakamoto M., Yuasa K., Takeda S.

11. **Low Density Lipoprotein Receptor Gene Therapy using Helper-Dependent Adenovirus Produces Long-Term Protection against Atherosclerosis in a Mouse Model of Familial Hypercholesterolemia**

    Nomura S., Oka K., Merched A., Chan L.

12. **Development of Models for RPS19 Deficient Diamond-Blackfan Anemia using Inducible Lentiviral Mediated Expression of siRNA against RPS19**

    Miyake K., Flygare J., Kiefer T., Richter J., Utsugisawa T., Hamaguchi I., Wiznerowicz M., Trono D., Karlsson S.

Oral Sesseiion 2 (Abstract 13-20)

Neurologic Diseases: 14:00 – 18:00

Chairpersons: Fumio Endo, Toya Ohhashi

13. Inducible Reduction of Transgene Expression as a Fail-Safe System for Gene Therapy of Neurodegenerative Diseases

Li Xg., Muramatsu. S., Okada T., Kodera M., Nara Y., Takino N., Ikeguchi K., Urano F., Ichinose H., Nakano I., Ozawa K.

14. *In Vivo* Monitoring of Transgene Expression in a Primate Model of Parkinson's Disease; Potential Application of Positron Emission Tomography in Gene Therapy

Muramatsu S., Kakiuchi T., Ono F., Nara Y., Kodera M., Takino N., Nishiyama S., Harada N., Fukuyama D., Tsuchida J., Ikeguchi K., Fujimoto K., Terao K., Tsukada H., Nakano I., Ozawa K.

15. Therapeutic Approach for Alzheimer's Disease by Neprilysin Gene Transfer

Iwata N., Mizukami H., Muramatsu S., Ozawa K., Saido TC.

16. Adenoviral MeCP2 Gene Therapy for Rett Syndrome in Mice

Kosai K., Isagai T., Kusaga A., Hirata K., Nagano S., Murofushi Y., Matsuishi T.

Stem Cells: 15:00 – 16:00

Chairpersons: Osamu Mazda, Hiromitsu Nakauchi

17. Cytokine Gene-Modified Mesenchymal Stem Cells Promote Functional Recovery and Reduce Infarct Size In The Rat Middle Cerebral Artery Occlusion Model

Kurozumi K., Nakamura K., Ichikawa T., Tamiya T., Ito Y., Honmou O., Houkin K., Hamada H., Date I.

18. Long-Term Behavioral Improvement after Intra-Cerebral Transplantation of Neural Stem Cells into the Mice with Mucopolysaccharidosis VII

Fukuhara Y., Kosuga M., Okano H., Okuyama T.

19. Targeted Chromosomal Integration using Adenoviral Vectors as an Approach for Ideal Stem Cell Gene Therapy

Ohbayashi F., Mitani K.

20. Development of an Adenoviral Vector System for Embryonic Stem (ES) Cells

Kawabata K., Mizuguchi H., Sakurai F., Yamaguchi T., Hayakawa T.

Oral Session 3 (Abstract 21-32)

Day 2: August 6, 2004

Cell and Gene Targeting : 9:30 – 10:30

Chairpersons: Yoshiro Niitsu, Tomoki Todo

21. Telomelysin (OBP-301): Telomerase (Tumor)-specific Repication-selective Adenoviral Agent for Human Cancer

Fujiwara T., Kagawa S., Nishizaki M., Tokunaga N., Taki M., Fujiwara T., Kishimoto H., Endo Y., Tanaka N., Kyo S. Nagai K., Urata Y.

22. A Rapid, Efficient and Feasible Construction of Conditionally Replicating Adenoviral Vectors that Target Cancer Cells with Multiple Factors

Kosai K., Nagano S., Oshika H., Murofushi Y., Kamizono J., Komiya S., Fujiwara H.

23. Survivin-Dependent Conditionally Replicating Adenovirus Achieves Specific and Efficient Cancer Therapy

Kamizono J., Nagano S., Murofushi Y., Kosai K.

24. Efficient Transduction of Mouse Alveolar and Bronchiolar Cells by Pseudotyped Simian Immunodeficency Virus Vector with Sendai Virus F and HN Protein

Ueda Y., Mitomo K., Shirohzu H., Tabata T., Griesenbach U., Hyde SC., Alton EW., Hasegawa M.

Vector Development - (1) : 10:30 – 11:30

Chairpersons: Izumi Saito, Takashi Shimada

25. Development of a Novel Method for Constructing Adenovirus Vector using Site-Specific Recombinase

Kondo S., Fukuda H., Nakano M., Kanegae Y., Saito I.

26. PEGylation of Adenovirus Vector Enhances Gene Expression in Tumor via Systemic Administration

Eto Y., Gao JQ., Sekiguchi F., Kurachi S., Katayama K., Sakurai F., Mizuguchi H., Hayakawa T., Tsutsumi Y., Mayumi T., Nakagawa S.

27. Gene Transfer into Hematopoietic Cells using A Helper-Dependent Adenoviral Vector with the Chimeric AD5/35 Fiber

Mitani K., Balamotis MA.

28. Entire Liver Transduction with AAV Serotype 8 Vector in Mice

Nakai H., Muramatsu S., Nara Y., Fuess S., Storm TA., Kay MA.

Vector Development-(II) : 11:30 – 12:30

Chairpersons: Hideaki Tahara, Hirofumi Hamada

29. High Performance Gene Transfer Molecular Conjugate: Molecular Design of Nano-structured Branched Cationic Polymers as a Non-virus Vector

Nakayama Y., Nagaishi M., Kakei C., Hayashi M., Masuda T., Shiba M., Ohira M.

30. Successful Recovery and Characterization of all of the Envelop-Related Genes (Matrix, Fusion and Hemagglutinin-Neuraminidase)-Deleted Sendai Virus Vectors

Inoue M., Yoshizaki M., Tokusumi Y., Hironaka T., Ban H., Nagai Y., Iida A., Hasegawa M.

31. High-Capacity Adenovirus/Retrotransposon Hybrid Vectors for Efficient and Stable Gene Transfer

Kubo S., Soifer H., Moran J., Kazazian H., Kasahara N.

32. Amplification of Transgene Expression by a Transcriptional Booster System

Takeshita F., Xin KQ., Okuda K., Sasaki S.

Poster Session (1)

Day 1: August 5, 2004 (16:10-17:50)

RNA Virus Vectors

33. Efficient Gene Transfer and Drug-Inducible Reduction of Transgene Expression in Primate Embryonic Stem Cells by the Non-Integrating Sendai Virus Vector

Sasaki K., Inoue M., Ueda Y., Muramatsu S., Shibata H., Okada T., Hasegawa M., Ozawa K., Hanazono Y.

34. Recombinant Sendai Virus is an Efficient Gene Transfer Vehicle for Human Monocytes-Derived Dendritic Cells

Okano S., Yonemitsu Y., Hasegawa M., Sueishi K.

35. Sendai Virus Mediated Angiopoietin-1 Gene Therapy Promotes Early Recovery from Ischemic State

Ito Y., Huang J., Uzuka T., Homma Y., Dehari H., Kobune M., Inoue M., Hasegawa M., Abe T., Hamada H.

36. Myocardial Gene Transduction by Recombinant Sendai Virus Vector

Homma Y., Ito Y., Dehari H., Huang J., Hirai S., Uzuka T., Kobune M., Inoue M., Hasegawa M., Abe T., Hamada H.

37. Characterization of a GFP-CFTR Fusion Protein Proved The Proper Maturation of CFTR Protein Expressed by SEV Vector

Ban H. Inoue M. You J. Iida A. Griesenbach U. Hyde SC. Alton EW. Hasegawa M.

38. Engineered Long Terminal Repeats of Retroviral Vectors Enhance Transgene Expression in Hepatocytes *in vitro* and *in vivo*

Yamaguchi K., Itoh K., Ohnishi N., Itoh Y., Okanoue T., Fujita J.

39. Optimization of Retroviral Gene Transfer Condition Assisted by RetroNectin® Bound Virus Infection Method and Scale up of the Infection Procedure in the Closed System using Gas Permeative Culture Bag.

Chono H., Okuyama H., Koyama N., Mineno J., Kato I.

40. Reformed LAM-PCR: Faithfully Track the Chromosomal DNA at the Site of Retoroviral Integration for Analyzing the Clonal Make-up of Transduced Cells

Sagawa H., Ueno H., Tomono J., Kato I.

41. Genomic Stability of the p53 Sequence Transferred by a Retroviral Vector

Su S., Watanabe A., Yamamoto M., Shimada T.

42. Retrovirus Mediated in Utero Gene Therapy to the CNS

Shen JS., Meng XL., Ohashi T., Eto Y.

43. Genetic Modification of Murine Embryonic Stem Cells by the Gene Silencing Resistance Retroviral Vector GCDsap

Hamanaka S., Usui J., Takahashi S., Yoshida H., Nagata M., Otsu M., Kaneko S., Nagasawa T., Nakauchi H., Onodera M.

44. An Inhibitory Effect of a Sequence Just Upstream of the Central Polypurine Tract of HIV-1 on RNA Production of an HIV-1-based Vector

Sakuma R., Iwamoto A., Kitamura Y.

45. Lentiviral Replacement of INK4A/ARF Genes Efficiently Induce Anti-Tumor Effect

Bai Y., Soda Y., Chen M., Izawa K., Kobayashi S., Ooi J., Takahashi S., Uchimaru K., Iseki T., Miyoshi H., Takahashi TA., Tani K., Tojo A., Asano S.

46. Internal Promoter Activity of Lentiviral Vectors in Myeloid Cells Including Mature Neutrophils

Soda Y., Li X., Tani K., Bai Y., Cho SG., Saiki M., Futami M., Yokokawa A., Chen M., Izawa K., Nakazaki Y., Kobayashi S., Miyoshi H., Takahashi TA., Tojo A., Asano S.

47. Hematopoietic Cell Differentiation of Common Marmoset (Callithrix Jacchus) Embryonic Stem Cells and Their Genetic Manipulation Using the Third Generation Lentiviral Vector.

Kurita R., Sasaki E., Hiroyama T., Nakazaki Y., Izawa K., Ishii H., Tanioka Y., Hanazawa K., Osonoi M., Hashiguchi T., Bai YS., Soda Y., Li XJ., Nakamura Y., Watanabe S., Asano S., Tani K.

AAA Vectors

48. Development of a Low-Dose Radiation-Responsive Vector

Nenoi M., Daino K., Ichimura S.

49. Gene Therapy with SiRNA for Autosomal Dominant Diseases —Sequence-Dependent and Independent Discriminations of Mutant and Wild-Type Alleles by SiRNA—

Yokota T., Li Y., Taira K., Mizusawa H.

50. Optimal Serotypes and Characterization of Delivery Routes of AAV Vectors for Neonatal Gene Transfer

Ogura T., Mizukami H., Mimuro J., Okada T., Hamada H., Kume A., Yoshikawa H., Sakata Y., Ozawa K.

51. Scalable Production of Type 5 Adeno-Associated Virus Vectors in Invertebrate Cells with Recombinant Baculoviruses

Urabe M., Nakakura T., Kotin RM., Ozawa K.

52. A Novel Method for *in vivo* Gene Transfer to Adipose Tissue using Adeno-Associated Virus (AAV) Vectors

Mizukami H., Mimuro J., Ogura T., Okada T., Kume A., Sakata Y., Ozawa K.

53. Adeno-Associated Virus Vector-Mediated Systemic Expression of Interleukin-10 Ameliorates Monocrotaline-Induced Pulmonary Hypertension in Rats

Ito T., Okada T., Sarukawa M., Nomoto T., Yoshioka T., Maeda Y., Miyashita H., Mizukami H., Matsushita T., Kume A., Yamamoto K., Takahashi M., Ikeda U., Shimada K., Ozawa K.

54. Hemophilia a Gene Therapy Using Adeno-Associated Virus Dual Vector System: Improved FVIII Activity by Balanced Expression of Heavy and Light Chains of FVIII

Matsushita T., Mimuro J., Ishiwata A., Madoiwa S., Mizukami H., Urabe M., Okada T., Kume A., Sakata Y., Ozawa K.

55. Protection Against Aminoglycoside-Induced Ototoxicity by Adeno-Associated Virus Vector-Mediated GDNF Gene Transfer

Liu Y., Okada T., Shimazaki K., Nomoto T., Sheykholeslami K., Ajalli R., Muramatsu S., Takeuchi K., Mizukami H., Kume A., Xiao S., Ichimura K., Ozawa K.

Acquired Diseases

56. Utility of Formylglycine Generating Enzyme for Expression of Functional Arylsulfatase A: Implications for Gene Therapy of MLD

Takakusaki Y., Hisayasu S., Watanabe A., Shimada T.

57. An ex *vivo* Gene Therapy Approach for Metachromatic Leukodystrophy using Neural Progenitor Cells

Kawabata K., Migita M., Mochizuki H., Fukunaga Y., Shimada T.

58. Epigenetic Therapy for Individuals with Dementia-Susceptible Single Nucleotide Polymorphisms

Kagawa Y.

59. Induction of Angiogenesis by Transplantation of Primary Fibroblast Transduced with VEGF165

Maruyama H., Otsu M., Yamaguchi I., Onodera M.

60. Disturbed Tolerance against Severe Ischemia of Diabetic Hind Limbs is caused by Activated Protein Kinase-C and Disturbed PDGF-BB Expression

Tanii M., Yonemitsu Y., Shikada Y., Fujii T., Onimaru M., Okano S., Kaneko K., Hasegawa M., Maehara Y., Sueishi K.

61. Successful AAV Vector-Mediated Gene Transfer into Canine Skeletal Muscle Required Suppression of Excess Immune Responses

Yuasa K., Yoshimura M., Urasawa N., Sato K., Miyagoe-Suzuki Y., McCHowell J., Takeda S.

62. Prime-Boost Vaccination with Plasmid DNA and a Chimeric Adenovirus Type 5 Vector with Type 35 Fiber Induces Persistent Protective Immunity against HIV in Mice

Xin KQ., Someya K., Takeshita F., Sasaki S., Mizuguchi H., Hayakawa T., Hamajima K., Honda M., Okuda K.

63. Comparison of HIV-Specific Immunogenicity of Adeno-Associated Virus Type 1-5 Vector in Mice

Xin KQ., Urabe M., Takeshita F., Sasaki S., Mizukami H., Hamajima K., Ozawa K., Okuda K.

Poster Session (2)

Day II: August 6, 2004 (13:30-15:00)

DNA Virus Vectors

64. Gene Delivery by Recombinant Baculoviruses

Tani H., Limn Ck., Abe T., Matsunaga T., Kitagawa Y., Miyamoto H., Mori Y., Moriishi K., Matsuura Y.

65. Enhancement of Oncolytic HSV-1 Antitumor Efficacy by Simultanious Delivery of Multiple Immunostimulatory Genes

Ino Y., Saeki Y., Chiocca EA., Todo T.

66. In vivo Bioimaging of Transgene Expression in Intact Living Animals

Okada T., Ogura T., Fujishiro J., Sato Y., Kobayashi M., Hakamata Y., Murakami T., Iwata-Okada M., Maeda Y., Mizukami H., Kume A., Kobayashi E., Ozawa K.

67. Isolated Liver Perfusion for Targeted Gene Delivery to Minimize Systemic Inflammatory Response by Adenovirus Vector

Kinoshita H., Hisayasu S., Watanabe A., Suzuki S., Shimada T.

68. Efficacy of Adenoviral-Mediated Gene Transfer using Fibrin Sealant

Sakurai M., Misawa T., Shiba H., Yamazaki Y., Yanaga K.

69. Transfection of the Helper Adenovirus Genome Carrying the Terminal Protein Complex (TPC) Drastically Improves the Rescue Efficiency of the Helper-Dependent Adenovirus Vector (HDAdv)

Maeda Y., Uchida Y., Yamashita S., Uchino M.

70. A Series of the Shuttle Vectors Generated Recombinant Adenovirus Harboring Human Full Length cDNA

Yamazaki T., Ugai H., Kujime Y., Inabe K., Hirose M., Terashima M., Yamamoto M., Kimura M., Murata T., Yokoyama KK.

71. Purification of Infectious Recombinant Adenovirus in Two Hours by Ultracentrifugation and Tangential Flow Filtration

Ugai H., Yamazaki T., Hirose M., Inabe K., Kujime Y., Terashima M., Kimura M., Murata T., Obata Y., Hamada H., Yokoyama KK.

72. Adenovirus Serotype 35 Vector-Mediated Transduction into Human CD46-Transgenic Mice

Sakurai F. Mizuguchi H. Kawabata K. Inoue N. Okabe M. Yamaguchi T. Hayakawa T.

73. Combination Gene Therapy of HGF and TβTR for Rat Liver Cirrhosis after Partial Hepatectomy

Ozawa S., Uchiyama K., Iwahashi M., Nakamori M., Ueda K., Yamaue H.

74. Cancer Vaccine using Dendritic Cells Adenovirally Transduced with Tumor-Associated Antigen Gene and Interleukin-12 Gene and /or GM-CSF Gene

Ojima T., Iwahashi M., Nakamura M., Matsuda K., Naka T., Nakamori M., Ueda K., Ishida., K Yamaue H.

75. Adenoviral Infection of Survivin Antisense Enhanced Chemosensitization of Etoposide to Human Prostate Cancer Du145 in vitro and in vivo

Hayashi N., Asano K., Suzuki H., Ohashi T., Manome Y.

76. Tumor-targeting Immunogene Therapy by Mesenchymal Stem Cells Expressing CX3CL1

Xin H., Kanehira M., Andarini S., Kikuchi T., Mizuguchi H., Hayakawa T., Nukiwa T., Saijo Y.

77. Ad.IFN β gene Therapy Synergizes with COX-2 Inhibition to Suppress Large Mesothelioma Tumors

Tanaka T., Odaka M., Albelda SM., Yanaga K., Yamazaki Y.

78. Conditionally Replicating Adenovirus Regulated with Telomerase and E2F in Combination with Mutated E1A and E1B Increased Cancer-Specificity

Murofushi Y., Nagano S., Kamizono J. Kosai K.

79. Molecular Therapy for Peritoneal Dissemination of MKN-45 Gastric Cancer Cells with Adenovirus Mediated BAX Gene Transfer

Kagawa S., Tsunemitsu Y., Tokunaga N., Ohtani S., Umeoka T., Nishizaki M., Tanaka N., Fujiwara T.

Nonviral Vectors

80. Improvement of Diabetic Neuropathy in Mice by Electroporation using VEGF164 Plasmid

Murakami T., Arai M., Nakamura A., Sunada Y.

81. Prevention of Onset of Parkinson's Disease by in vivo Gene Transfer of Human Hepatocyte Growth Factor in Rodent and Primate Model: A Model of Gene Therapy for Parkinson's Disease

Koike H., Ishida A., Tomita N., Shimamura M., Sato N., Hayashi T., Iida H., Teramoto N., Ikeda H., Ito A., Ogihara T., Kaneda Y., Morishita R.

82. Construction of Ultrasonic Apparatus for Gene Delivery of Naked Plasmid DNA into the Central Nerves System

Nakayama N., Furuhata H., Manome Y.

83. The Inhibitory Effect of Naked Plasmid by the Hydrodynamics-Based Procedure on Liver Metastasis

Yonenaga Y., Mori A.

84. Therapeutic Potential of RNA Interference of Bcl-2 for Enhancement of Chemotherapeutic Effect in Gastric Carcinoma Cells

Kim R., Emi M., Tanabe K., Toge T.

85. Gene Transfer of Stromal Cell-Derived Factor-1 α Enhances Ischemic Vasculogenesis and Angiogenesis via Vascular Endothelial Growth Factor/Endothelial Nitric Oxide Synthase-Related Pathway

Hiasa K., Ishibashi M., Ohtani K., Inoue S., Kitamoto S., Sata M., Ichiki T., Takeshita A., Egashira K.

86. Acceleration of Wound Healing by Simultaneous Transfection of Hepatocyte Growth Factor Gene and Prostacyclin Synthase Gene using Shima Jet

Kunugiza Y., Tomita N., Taniyama Y., Koike H., Kaneda Y., Morishita R.

Cancer Gene Therapy

87. Potent Vaccine Therapy with Dendritic Cells Genetically Modified by the Retroviral Vector GCDNsap

Nabekura T., Otsu M., Nagasawa T., Nakauchi H., Onodera M.

88. Induction of Efficient Antitumor Immunity against Established B16 Melanoma using Highly Activated Dendritic Cells Produced by Recombinant Sendai Virus Vector

Shibata S., Yonemitsu Y., Okano S., Nagata S., Takeshita H., Sata S., Inoue M., Furue M., Hasegawa M., Sueishi K.

89. **Expression of the Interleukin-27 Gene in Murine Carcinoma Cells Induced Systemic Immunity**

Tagawa M., Kawamura K.

90. **Electrogene Transfer of IL-12 Inhibits Mouse Mammary Carcinoma Growth and Metastasis via Activation of T Cell-Mediated Immune Responses and Suppression of Angiogenesis**

Shibata M., Ito Y., Morimoto J., Kusakabe K., Otsuki Y.

91. **The Tumor Suppressor Activity of Melanoma Differentiation Associated Gene-7 /Interleukin-24 (Mda-7/IL-24) through Caspase Pathways in Human Hepatic Cancer Cells.**

Kato K., Saeki T., Kanai H., Misawa T., Yamazaki Y., Yanaga K.

92. **Significant Antitumoral Activity of Cationic Multilamellar Liposomes Containing Human Interferon-beta Gene alone, and in Combination with Anticancer Drug against Human Renal Cell Carcinoma**

Yamamoto K., Mizutani Y., Nakanishi H., Kawauchi A., Mizuno M., Yoshida J., Miki T.

93. **Interferon α and Antisense K-ras RNA Combination Gene Therapy against Pancreatic Cancer**

Aoki K., Hatanaka K., Suzuki K., Miura Y., Yoshida K., Ohnami S., Kitade Y., Yoshida T.

94. **Destruction of Nonimmunogenic Mammary Tumor Cells by a Doubly Fusogenic Oncolytic Herpes Simplex Virus Induces Potent Anti-Tumor Immunity.**

Nakamori M., Fu X., Rousseau R., Chen SY., Yamaue H., Zhang X.

95. **Gene Therapy for Human Small Cell Lung Carcinoma by Inactivation of Skp-2 with Virally Mediated RNA Interference**

Sumimoto H., Miyagishi M., Miyoshi H., Mizuguchi H., Yamagata S., Shimizu A., Hayakawa T., Taira K., Kawakami Y.

96. **Angiogenic Endothelium-specific Nestin Expression by the First Intron of the Nestin Gene**

Aihara M., Sugawara K., Kurihara H., Saito N., Takeuchi T.

97. **Platelet-Derived Growth Factor-A is an Autocrine Angiogenic Switch in Solid Tumor: a Possible Molecular Target for Disrupting Tumor Angiogenesis**

Shikada Y., Yonemitsu Y., Onimaru M., Maehara Y., Hasegawa M., Sueishi K.

Author Index