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◆現在の研究テーマ

- ・ ウイルス製剤（アデノウイルス、レオウイルス）による癌治療・遺伝子治療に関する研究
- ・ 癌・ウイルス感染症治療に向けた免疫活性化能を有する核酸医薬の開発
- ・ Noncoding RNA による遺伝子発現制御システムを搭載した遺伝子導入ベクターの開発
- ・ 二本鎖 RNA による遺伝子発現活性化（RNA activation）に関する研究

◆略歴

- 1996年3月 京都大学薬学部製薬化学科卒業
- 1998年3月 京都大学大学院薬学研究科博士前期課程修了
- 2001年3月 京都大学大学院薬学研究科博士後期課程修了（博士（薬学））
（薬品動態制御学分野；橋田充教授）
学位論文「プラスミド DNA/カチオン性リポソーム複合体の物理化学的性質と遺伝子発現効率との関連に関する研究」
- 2001年4月 国立医薬品食品衛生研究所 生物薬品部 賃金職員
新規アデノウイルスベクターの開発
- 2001年10月 国立医薬品食品衛生研究所 生物薬品部 リサーチレジデント
新規アデノウイルスベクターの開発と機能解析
- 2003年4月 国立医薬品食品衛生研究所 遺伝子細胞医薬部 研究員
新規アデノウイルスベクターの開発と機能解析
- 2005年4月 独立行政法人医薬基盤研究所 遺伝子導入制御プロジェクト 研究員
新規アデノウイルスベクターの開発と機能解析
microRNA による遺伝子発現制御システムを搭載した遺伝子導入ベクターの開発
- 2009年1月 テキサス大学ダラス校サウスウエスタンメディカルセンター
博士研究員（Dr. David Corey）
二本鎖 RNA による遺伝子発現活性化（RNA activation）に関する研究
- 2010年4月 大阪大学大学院薬学研究科分子生物学分野 准教授
- 2013年4月 大阪大学大学院薬学研究科核酸医薬規制評価科学分野・准教授（兼任）
（2017年3月まで）
- 2014年8月 文部科学省 学術調査官（非常勤）（2016年7月まで）

- ◆受賞 2008年3月 日本薬学会奨励賞 (日本薬学会第128年会)
- 2011年6月 日本DDS学会奨励賞 (第27回日本DDS学会)
- 2013年7月 大阪大学総長奨励賞
- 2014年5月 American Society of Gene and Cell Therapy 17th Annual meeting
Outstanding Poster Presentation Award
- 2014年8月 大阪大学総長奨励賞
- 2015年6月 臨床薬理研究振興財団研究大賞
- 2017年3月 大阪大学 薬友会賞 (研究部門賞)
- 2018年7月 日本遺伝子細胞治療学会研究奨励賞 (タカラバイオ賞)

◆研究業績

原著論文

1. Ishigami I, Shuwari N, Kaminade T, Mizuguchi H, **Sakurai F***. A TGF- β signaling inhibitor, SB431542, inhibits reovirus-mediated lysis of human hepatocellular carcinoma cells in a TGF- β -independent manner. *Anticancer Res. In press.* (*Corresponding author)
2. Hirai T, Sato A, Koizumi N, Kurioka Y, Suzuki Y, Kano J, Yamakawa M, Nomura T, Fujii M, **Sakurai F**, Mizuguchi H, Watanabe Y, Utoguchi N. The infectivity of progeny adenovirus in the presence of neutralizing antibody. *J Gen Virol.* 102(4). (2021)
3. Shimizu K, Ogiya Y, Yoshinaga K, Kimura H, Michinaga S, Ono M, Taketomi A, Terada T, **Sakurai F**, Mizuguchi H, Tomita K, Nishinaka T. ZFAND3 Overexpression in the Mouse Liver Improves Glucose Tolerance and Hepatic Insulin Resistance. *Exp Clin Endocrinol Diabetes. In press.*
4. Ono R, Takayama K, **Sakurai F***, Mizuguchi H. Efficient antitumor effects of a novel oncolytic adenovirus fully composed of species B adenovirus serotype 35. *Mol Ther Oncolytics.* 20: 399-409. (2021) (*Corresponding author)
5. Inoue C, Negoro R, Takayama K, Mizuguchi H, **Sakurai F***. Asymmetric profiles of infection and innate immunological responses in human iPS cell-derived small intestinal epithelial-like cell monolayers following infection with mammalian reovirus. *Virus Res.* 296: 198334. (2021) (*Corresponding author)
6. **Sakurai F****, Nishimae F[#], Takayama K, Mizuguchi H. Optimization of an E1A Gene Expression Cassette in an Oncolytic Adenovirus for Efficient Tumor Cell Killing Activity. *Anticancer Res.* 41: 773-782. (2021) (*Corresponding author, [#]equally contributed)
7. Shimizu K[#], **Sakurai F****, Iizuka S, Ono R, Tsukamoto T, Nishimae F, Nakamura SI, Nishinaka T, Terada T, Fujio Y, Mizuguchi H. Adenovirus Vector-Induced IL-6 Promotes Leaky Adenoviral Gene Expression, Leading to Acute Hepatotoxicity. *J Immunol.* 206: 410-421. (2021) (*Corresponding author, [#]equally contributed)
8. Wakabayashi K, **Sakurai F***, Ono R, Fujiwara T, Mizuguchi H. Development of a Novel Oncolytic Adenovirus Expressing a Short-hairpin RNA Against Cullin 4A. *Anticancer Res.* 40: 161-168. (2020) (*Corresponding author)
9. Tachibana M, Watanabe N, Koda Y, Oya Y, Kaminuma O, Katayama K, Fan Z, **Sakurai F**, Kawabata K, Hiroi T, Mizuguchi H. Ablation of IL-17A leads to severe colitis in IL-10-deficient mice: implications of myeloid-derived suppressor cells and NO production. *Int Immunol.* 32: 187-201. (2020)

10. Tsukamoto T, Sakai E, Nishimae F, **Sakurai F**, Mizuguchi H. Efficient generation of adenovirus vectors carrying the Clustered regularly interspaced short palindromic repeat (CRISPR)-CRISPR associated proteins (Cas)12a system by suppressing Cas12a expression in packaging cells. *J Biotechnol*. 304: 1-9. (2019)
11. **Sakurai F**^{#*}, Hashimoto R[#], Inoue C, Wakabayashi K, Tsukamoto T, Imaizumi T, Andres TGM, Sakai E, Itsuki K, Sakamoto N, Wakita T, Mizuguchi H. miR-27b-mediated suppression of aquaporin-11 expression in hepatocytes reduces HCV genomic RNA levels but not viral titers. *Virol J*. 16: 58. (2019) (*Corresponding author, [#]equally contributed)
12. Toba Y, Kiso A, Nakamae S, **Sakurai F**, Takayama K, Mizuguchi H. FGF signal is not required for hepatoblast differentiation of human iPS cells. *Sci Rep*. 9: 3713. (2019)
13. Hotani T, Mizuguchi H, **Sakurai F**^{*}. Systemically Administered Reovirus-Induced Downregulation of Hypoxia Inducible Factor-1 α in Subcutaneous Tumors. *Mol Ther Oncolytics*. 12: 162-172. (2018) (*Corresponding author)
14. Morikawa N, Tachibana M, Ago Y, Goda H, **Sakurai F**, Mizuguchi H. LY341495, an mGluR2/3 Antagonist, Regulates the Immunosuppressive Function of Myeloid-Derived Suppressor Cells and Inhibits Melanoma Tumor Growth. *Biol Pharm Bull*. 41: 1866-1869. (2018)
15. Negoro R, Takayama K, Kawai K, Harada K, **Sakurai F**, Hirata K, Mizuguchi H. Efficient Generation of Small Intestinal Epithelial-like Cells from Human iPSCs for Drug Absorption and Metabolism Studies. *Stem Cell Reports*. 11: 1539-1550. (2018)
16. Wakabayashi K, Machitani M, Tachibana M, **Sakurai F**^{*}, Mizuguchi H. A MicroRNA Derived from Adenovirus Virus-Associated RNAII Promotes Virus Infection via Posttranscriptional Gene Silencing. *J Virol*. 93: e01265-18. (2019) (*Corresponding author)
17. Matoba N, Yamashita T, Takayama K, **Sakurai F**, Mizuguchi H. Optimal human iPS cell culture method for efficient hepatic differentiation. *Differentiation*. 104: 13-21. (2018)
18. Asada A, Hayakawa H, Yanase N, Abe K, **Sakurai F**, Mizuguchi H, Urata Y. A Flow Cytometry-Based Method to Determine the Titer of Adenoviruses Expressing an Extraneous Gene. *Biol Pharm Bull*. 41: 1615-1619. (2018)
19. Tomita K[#], **Sakurai F**^{#*}, Iizuka S, Hemmi M, Wakabayashi K, Machitani M, Tachibana M, Katayama K, Kamada H, Mizuguchi H. Antibodies against adenovirus fiber and penton base proteins inhibit adenovirus vector-mediated transduction in the liver following systemic administration. *Sci Rep*. 8: 12315. (2018) (*Corresponding author, [#]equally contributed)
20. Tsukamoto T, Sakai E, Iizuka S, Taracena-Gándara M, **Sakurai F**, Mizuguchi H. Generation of the Adenovirus Vector-Mediated CRISPR/Cpf1 System and the Application for Primary Human Hepatocytes Prepared from Humanized Mice with Chimeric Liver. *Biol Pharm Bull*. 41: 1089-1095. (2018)
21. Watanabe J, Togo S, Sumiyoshi I, Namba Y, Suina K, Mizuno T, Kadoya K, Motomura H, Iwai M, Nagaoka T, Sasaki S, Hayashi T, Uekusa T, Abe K, Urata Y, **Sakurai F**, Mizuguchi H, Kato S, Takahashi K. Clinical features of squamous cell lung cancer with anaplastic lymphoma kinase (ALK)-rearrangement: a retrospective analysis and review. *Oncotarget*. 9: 24000-24013. (2018)
22. Okamoto R, Takayama K, Akita N, Nagamoto Y, Hosokawa D, Iizuka S, **Sakurai F**, Suemizu H, Ohashi K, Mizuguchi H. Human iPS Cell-based Liver-like Tissue Engineering at Extrahepatic Sites in Mice as a New Cell Therapy for Hemophilia B. *Cell Transplant*. 27: 299-309. (2018)
23. Katayama Y, Tachibana M, Kurisu N, Oya Y, Terasawa Y, Goda H, Kobiyama K, Ishii KJ, Akira S, Mizuguchi H, **Sakurai F**^{*}. Oncolytic Reovirus Inhibits Immunosuppressive Activity of Myeloid-Derived

- Suppressor Cells in a TLR3-Dependent Manner. *J Immunol.* 200: 2987-2999. (2018) (*Corresponding author)
24. Takayama K, Hagihara Y, Toba Y, Sekiguchi K, **Sakurai F**, Mizuguchi H. Enrichment of high-functioning human iPS cell-derived hepatocyte-like cells for pharmaceutical research. *Biomaterials.* 161: 24-32. (2018)
 25. Yamashita T, Takayama K, **Sakurai F**, Mizuguchi H. Billion-scale production of hepatocyte-like cells from human induced pluripotent stem cells. *Biochem Biophys Res Commun.* 496: 1269-1275. (2018)
 26. Nakamae S, Toba Y, Takayama K, **Sakurai F**, Mizuguchi H. Nanaomycin A Treatment Promotes Hepatoblast Differentiation from Human iPS Cells. *Stem Cells Dev.* 27: 405-414. (2018)
 27. Takayama K, Akita N, Mimura N, Akahira R, Taniguchi Y, Ikeda M, **Sakurai F**, Ohara O, Morio T, Sekiguchi K, Mizuguchi H. Generation of safe and therapeutically effective human induced pluripotent stem cell-derived hepatocyte-like cells for regenerative medicine. *Hepatol Commun.* 1: 1058-1069. (2017)
 28. Takakura M, Matsumoto T, Nakamura M, Mizumoto Y, Myojyo S, Yamazaki R, Iwadare J, Bono Y, Orisaka S, Obata T, Iizuka T, Kagami K, Nakayama K, Hayakawa H, **Sakurai F**, Mizuguchi H, Urata Y, Fujiwara T, Kyo S, Sasagawa T, Fujiwara H. Detection of circulating tumor cells in cervical cancer using a conditionally replicative adenovirus targeting telomerase-positive cells. *Cancer Sci.* 109: 231-240. (2018)
 29. Iizuka S[#], **Sakurai F**[#], Tachibana M, Ohashi K, Mizuguchi H. Neonatal Gene Therapy for Hemophilia B by a Novel Adenovirus Vector Showing Reduced Leaky Expression of Viral Genes. *Mol Ther Methods Clin Dev.* 6: 183-193. (2017) (*Corresponding author, [#]equally contributed)
 30. Machitani M, **Sakurai F**^{*}, Wakabayashi K, Nakatani K, Tachibana M, Kato N, Fujiwara T, Mizuguchi H^{*}. Suppression of Oncolytic Adenovirus-Mediated Hepatotoxicity by Liver-Specific Inhibition of NF- κ B. *Mol Ther Oncolytics.* 7: 76-85. (2017) (*Corresponding author)
 31. Nakamori D, Akamine H, Takayama K, **Sakurai F**, Mizuguchi H. Direct conversion of human fibroblasts into hepatocyte-like cells by ATF5, PROX1, FOXA2, FOXA3, and HNF4A transduction. *Sci Rep.* 7: 16675. (2017)
 32. Hemmi M, Tachibana M, Fujimoto N, Shoji M, Sakurai F, Kobiyama K, Ishii KJ, Akira S, Mizuguchi H. T Helper 17 Promotes Induction of Antigen-Specific Gut-Mucosal Cytotoxic T Lymphocytes following Adenovirus Vector Vaccination. *Front Immunol.* 8: 1456. (2017)
 33. **Sakurai F**^{*}, Kunito T, Takayama K, Hashimoto R, Tachibana M, Sakamoto N, Wakita T, Mizuguchi H^{*}. Hepatitis C virus-induced innate immune responses in human iPS cell-derived hepatocyte-like cells. *Virus Res.* 242: 7-15. (2017) (*Corresponding author)
 34. Sakai E, Miura Y, Suzuki-Kouyama E, Oka K, Tachibana M, Kawabata K, **Sakurai F**, Mizuguchi H. A mammalian mirtron miR-1224 promotes tube-formation of human primary endothelial cells by targeting anti-angiogenic factor epsin2. *Sci Rep.* 7: 5541. (2017)
 35. Machitani M, **Sakurai F**^{*}, Wakabayashi K, Nakatani K, Tachibana M, Mizuguchi H^{*}. MicroRNA miR-27 Inhibits Adenovirus Infection by Suppressing the Expression of SNAP25 and TXN2^{*}. *J Virol.* 91. pii: e00159-17. (2017) (*Corresponding author)
 36. Togo S, Katagiri N, Namba Y, Tulafu M, Nagahama K, Kadoya K, Takamochi K, Oh S, Suzuki K, **Sakurai F**, Mizuguchi H, Urata Y, Takahashi K. Sensitive detection of viable circulating tumor cells using a novel conditionally telomerase-selective replicating adenovirus in non-small cell lung cancer patients. *Oncotarget.* 8: 34884-34895. (2017)

37. Takayama K, Igai K, Hagihara Y, Hashimoto R, Hanawa M, Sakuma T, Tachibana M, **Sakurai F**, Yamamoto T, Mizuguchi H. Highly efficient biallelic genome editing of human ES/iPS cells using a CRISPR/Cas9 or TALEN system. *Nucleic Acids Res.* 45: 5198-5207. (2017)
38. Hanawa M, Takayama K, **Sakurai F**, Tachibana M, Mizuguchi H. Hepatocyte Nuclear Factor 4 Alpha Promotes Definitive Endoderm Differentiation from Human Induced Pluripotent Stem Cells. *Stem Cell Rev.* 13: 542-551. (2017)
39. Mitani S, Takayama K, Nagamoto Y, Imagawa K, **Sakurai F**, Tachibana M, Sumazaki R, Mizuguchi H. Human ESC/iPSC-Derived Hepatocyte-like Cells Achieve Zone-Specific Hepatic Properties by Modulation of WNT Signaling. *Mol Ther.* 25: 1420-1433. (2017)
40. Shimizu K, Okamoto M, Terada T, **Sakurai F**, Mizuguchi H, Tomita K, Nishinaka T. Adenovirus vector-mediated macrophage erythroblast attacher (MAEA) overexpression in primary mouse hepatocytes attenuates hepatic gluconeogenesis. *Biochem. Biophys. Rep.*, 10: 192-197 (2017).
41. **Sakurai F***, Inoue S, Kaminade T, Hotani T, Katayama Y, Hosoyamada E, Terasawa Y, Tachibana M, Mizuguchi H. Cationic liposome-mediated delivery of reovirus enhances the tumor cell-killing efficiencies of reovirus in reovirus-resistant tumor cells. *Int J Pharm.* 524: 238-247. (2017) (*Corresponding author)
42. **Sakurai F***, Mitani S, Yamamoto T, Takayama K, Tachibana M, Watashi K, Wakita T, Iijima S, Tanaka Y, Mizuguchi H*. Human induced-pluripotent stem cell-derived hepatocyte-like cells as an in vitro model of human hepatitis B virus infection. *Sci Rep.* 7: 45698. (2017) (*Corresponding author)
43. Machitani M, **Sakurai F***, Wakabayashi K, Takayama K, Tachibana M, Mizuguchi H*. Type I Interferons Impede Short Hairpin RNA-Mediated RNAi via Inhibition of Dicer-Mediated Processing to Small Interfering RNA. *Mol Ther Nucleic Acids.* 6:173-182. (2017) (*Corresponding author)
44. Machitani M, **Sakurai F***, Wakabayashi K, Nakatani K, Takayama K, Tachibana M, Mizuguchi H*. Inhibition of CRISPR/Cas9-Mediated Genome Engineering by a Type I Interferon-Induced Reduction in Guide RNA Expression. *Biol Pharm Bull.* 40:272-277. (2017) (*Corresponding author)
45. Hirai T, Yamagishi Y, Koizumi N, Nonaka M, Mochida R, Shida K, Nomura T, Fujii M, **Sakurai F**, Mizuguchi H, Watanabe Y, Utoguchi N. Identification of Adenovirus-Derived Cell-Penetrating Peptide. *Biol Pharm Bull.* 40:195-204. (2017)
46. Imagawa K, Takayama K, Isoyama S, Tanikawa K, Shinkai M, Harada K, Tachibana M, **Sakurai F**, Noguchi E, Hirata K, Kage M, Kawabata K, Sumazaki R, Mizuguchi H. Generation of a bile salt export pump deficiency model using patient-specific induced pluripotent stem cell-derived hepatocyte-like cells. *Sci Rep.* 7: 41806. (2017)
47. Onishi T, Tazawa H, Hashimoto Y, Takeuchi M, Otani T, Nakamura S, **Sakurai F**, Mizuguchi H, Kishimoto H, Umeda Y, Shirakawa Y, Urata Y, Kagawa S, Fujiwara T. Tumor-specific delivery of biologics by a novel T-cell line HOZOT. *Sci Rep.* 6: 38060. (2016)
48. Machitani M[#], **Sakurai F****, Wakabayashi K, Tachibana M, Fujiwara T, Mizuguchi H*. Enhanced Oncolytic Activities of the Telomerase-Specific Replication-Competent Adenovirus Expressing Short-Hairpin RNA against Dicer. *Mol Cancer Ther.* 16: 251-259. (2017) (*Corresponding author, [#]equally contributed)
49. Machitani M[#], **Sakurai F****, Wakabayashi K, Tomita K, Tachibana M, Mizuguchi H. Dicer functions as an antiviral system against human adenoviruses via cleavage of adenovirus-encoded noncoding RNA. *Sci Rep.* 6: 27598. (2016) (*Corresponding author, [#]equally contributed)

50. Takayama K, Mitani S, Nagamoto Y, **Sakurai F**, Tachibana M, Taniguchi Y, Sekiguchi K, Mizuguchi H. Laminin 411 and 511 promote the cholangiocyte differentiation of human induced pluripotent stem cells. *Biochem Biophys Res Commun.* 474: 91-6. (2016)
51. Negoro R, Takayama K, Nagamoto Y, **Sakurai F**, Tachibana M, Mizuguchi H. Modeling of drug-mediated CYP3A4 induction by using human iPSC cell-derived enterocyte-like cells. *Biochem Biophys Res Commun.* 472: 631-6. (2016)
52. Hanayama H, Ohashi K, Utoh R, Shimizu H, Ise K, **Sakurai F**, Mizuguchi H, Tsuchiya H, Okano T, Gotoh M. Efficient Gene Transduction of Dispersed Islet Cells in Culture Using Fiber-Modified Adenoviral Vectors. *Cell Med.* 8: 31-8. (2015)
53. Machitani M, **Sakurai F***, Wakabayashi K, Nakatani K, Shimizu K, Tachibana M, Mizuguchi H*. NF- κ B promotes leaky expression of adenovirus genes in a replication-incompetent adenovirus vector. *Sci Rep.* 6: 19922. (2016) (*Corresponding author)
54. Nagamoto Y, Takayama K, Ohashi K, Okamoto R, **Sakurai F**, Tachibana M, Kawabata K, Mizuguchi H. Transplantation of a human iPSC-derived hepatocyte sheet increases survival in mice with acute liver failure. *J Hepatol.* 64: 1068-75. (2016)
55. **Sakurai F***, Narii N, Tomita K, Togo S, Takahashi K, Machitani M, Tachibana M, Ouchi M, Katagiri N, Urata Y, Fujiwara T, Mizuguchi H*. Efficient detection of human circulating tumor cells without significant production of false-positive cells by a novel conditionally replicating adenovirus. *Mol. Ther. Methods. Clin. Dev.* 3: 16001. (2016) (*Corresponding author)
56. Nakamori D, Takayama K, Nagamoto Y, Mitani S, **Sakurai F**, Tachibana M, Mizuguchi H. Hepatic Maturation of Human iPSC Cell-Derived Hepatocyte-Like Cells by ATF5, c/EBP α , and PROX1 Transduction. *Biochem. Biophys. Res. Commun.* 469: 424-429. (2016)
57. Ozawa T, Takayama K, Okamoto R, Negoro R, **Sakurai F**, Tachibana M, Kawabata K, Mizuguchi H. Generation of enterocyte-like cells from human induced pluripotent stem cells for drug absorption and metabolism studies in human small intestine. *Sci Rep.* 5: 16479. (2015)
58. Tsuzuki S, Tachibana M, Hemmi M, Yamaguchi T, Shoji M, **Sakurai F**, Kobiyama K, Kawabata K, Ishii KJ, Akira S, Mizuguchi H. TANK-binding kinase 1-dependent or -independent signaling elicits the cell-type-specific innate immune responses induced by the adenovirus vector. *Int Immunol.* 28: 105-115 (2015).
59. Nagamoto Y, Takayama K, Tashiro K, Tateno C, **Sakurai F**, Tachibana M, Kawabata K, Ikeda K, Tanaka Y, Mizuguchi H. Efficient Engraftment of Human Induced Pluripotent Stem Cell-Derived Hepatocyte-Like Cells in uPA/SCID Mice by Overexpression of FNK, a Bcl-xL Mutant Gene. *Cell Transplant.* 24: 1127-38. (2015)
60. Iizuka S[#], **Sakurai F****, Shimizu K, Ohashi K, Nakamura SI, Tachibana M, Mizuguchi H*. Evaluation of transduction properties of an adenovirus vector in neonatal mice. *Biomed Res Int.* 685374. (2015) (#equally contributed, *corresponding author)
61. Katayama Y, Terasawa Y, Tachibana M, Mizuguchi H, **Sakurai F***. Proteolytic disassembly of viral outer capsid proteins is crucial for reovirus-mediated type-I interferon induction in both reovirus-susceptible and reovirus-refractory tumor cells. *Biomed Res Int.* 468457. (2015). (* corresponding author)
62. Hotani T, Tachibana M, Mizuguchi H, **Sakurai F***. Reovirus double-stranded RNA genomes and polyI:C induce down-regulation of hypoxia-inducible factor 1 α . *Biochem Biophys Res Commun.* 460: 1041-6. (2015). (* corresponding author)

63. Terasawa Y, Hotani T, Katayama Y, Tachibana M, Mizuguchi H, **Sakurai F***. Activity levels of cathepsins B and L in tumor cells are a biomarker for efficacy of reovirus-mediated tumor cell killing. *Cancer Gene Ther.* 22: 188-97. (2015) (* corresponding author)
64. Shimizu K[#], **Sakurai F^{**}**, Tomita K, Nagamoto Y, Nakamura SI, Katayama K, Tachibana M, Kawabata K, Mizuguchi H. Suppression of leaky expression of adenovirus genes by insertion of microRNA-targeted sequences in the replication-incompetent adenovirus vector genome. *Mol. Ther. Methods. Clin. Dev.* 14035. (2014) (# equally contributed, * corresponding author)
65. Takayama K, Morisaki Y, Kuno S, Nagamoto Y, Harada K, Furukawa N, Ohtaka M, Nishimura K, Imagawa K, **Sakurai F**, Tachibana M, Sumazaki R, Noguchi E, Nakanishi M, Hirata K, Kawabata K, Mizuguchi H. Prediction of interindividual differences in hepatic functions and drug sensitivity by using human iPS-derived hepatocytes. *Proc Natl Acad Sci U S A.* 111: 16772-7. (2014)
66. Takayama K, Kawabata K, Nagamoto Y, Inamura M, Ohashi K, Okuno H, Yamaguchi T, Tashiro K, **Sakurai F**, Hayakawa T, Okano T, Furue MK, Mizuguchi H. CCAAT/enhancer binding protein-mediated regulation of TGF β receptor 2 expression determines the hepatoblast fate decision. *Development.* 141: 91-100. (2014)
67. Hemmi M, Tachibana M, Tsuzuki S, Shoji M, **Sakurai F**, Kawabata K, Kobiyama K, Ishii KJ, Akira S, Mizuguchi H. The early activation of CD8⁺ T cells is dependent on type I IFN signaling following intramuscular vaccination of adenovirus vector. *Biomed Res Int.* 2014: 158128. (2014)
68. Watanabe H, Takayama K, Inamura M, Tachibana M, Mimura N, Katayama K, Tashiro K, Nagamoto Y, **Sakurai F**, Kawabata K, Furue MK, Mizuguchi H. HHEX promotes hepatic-lineage specification through the negative regulation of eomesodermin. *PLoS One.* 9: e90791.(2014)
69. **Sakurai F***, Nanjo Y, Okamoto S, Tachibana M, Mizuguchi H. Upregulation of RECK gene expression by small double-stranded RNA targeting the promoter region. *Cancer Gene Ther.* 21: 164-70. (2014) (* corresponding author)
70. Kuno S, **Sakurai F**, Shimizu K, Matsumura N, Kim S, Watanabe H, Tashiro K, Tachibana M, Yokoi T, Mizuguchi H. Development of mice exhibiting hepatic microsomal activity of human CYP3A4 comparable to that in human liver microsomes by intravenous administration of an adenovirus vector expressing human CYP3A4. *Drug Metab Pharmacokinet.* 29: 296-304. (2014)
71. Machitani M, **Sakurai F**, Katayama K, Tachibana M, Suzuki T, Matsui H, Yamaguchi T, Mizuguchi H. Improving adenovirus vector-mediated RNAi efficiency by lacking the expression of virus-associated RNAs. *Virus Res.* 178: 357-63. (2013)
72. Takayama K, Nagamoto Y, Mimura N, Tashiro K, **Sakurai F**, Tachibana M, Hayakawa T, Kawabata K, Mizuguchi H. Long-term self-renewal of human ES/iPS-derived hepatoblast-like cells on human laminin 111-coated dishes. *Stem Cell Reports.* 1: 322-35. (2013)
73. Matsui H, **Sakurai F**, Katayama K, Abe Y, Machitani M, Kurachi S, Tachibana M, Mizuguchi H. A targeted adenovirus vector displaying a human fibronectin type III domain-based monobody in a fiber protein. *Biomaterials.* 34: 4191-201. (2013)
74. Matsui H, **Sakurai F**, Katayama K, Abe Y, Machitani M, Kurachi S, Tachibana M, Mizuguchi H. A targeted adenovirus vector displaying a human fibronectin type III domain-based monobody in a fiber protein. *Biomaterials.* 34: 4191-201.(2013)
75. Takayama K, Kawabata K, Nagamoto Y, Kishimoto K, Tashiro K, **Sakurai F**, Tachibana M, Kanda K, Hayakawa T, Furue MK, Mizuguchi H. 3D spheroid culture of hESC/iPSC-derived hepatocyte-like cells for drug toxicity testing. *Biomaterials.* 34: 1781-9 (2013).

76. Bennett D, **Sakurai F***, Shimizu K, Matsui H, Tomita K, Suzuki T, Katayama K, Kawabata K, Mizuguchi H. Further reduction in adenovirus vector-mediated liver transduction without largely affecting transgene expression in target organ by exploiting microRNA-mediated regulation and the Cre-loxP recombination system. *Mol Pharm.* 9: 3452-63. (2012) (*Corresponding author)
77. Shoji M, Katayama K, Tachibana M, Tomita K, **Sakurai F**, Kawabata K, Mizuguchi H. Intramuscular DNA immunization with in vivo electroporation induces antigen-specific cellular and humoral immune responses in both systemic and gut-mucosal compartments. *Vaccine.* 30:7278-85. (2012).
78. Shoji M, Tachibana M, Katayama K, Tomita K, Tsuzuki S, **Sakurai F**, Kawabata K, Ishii KJ, Akira S, Mizuguchi H. Type-I IFN signaling is required for the induction of antigen-specific CD8(+) T cell responses by adenovirus vectorvaccine in the gut-mucosa. *Biochem Biophys Res Commun.* 425: 89-93. (2012).
79. Tashiro K, Omori M, Kawabata K, Hirata N, Yamaguchi T, **Sakurai F**, Takaki S, Mizuguchi H. Inhibition of Ink in mouse induced pluripotent stem cells promotes hematopoietic cell generation. *Stem Cells Dev.* 21: 3381-90. (2012).
80. Takayama K, Inamura M, Kawabata K, Sugawara M, Kikuchi K, Higuchi M, Nagamoto Y, Watanabe H, Tashiro K, **Sakurai F**, Hayakawa T, Furue MK, Mizuguchi H. Generation of metabolically functioning hepatocytes from human pluripotent stem cells by FOXA2 and HNF1 α transduction. *J Hepatol.* 57: 628-36. (2012)
81. Tomita K, **Sakurai F**, Tachibana M, Mizuguchi H. Correlation between adenovirus-neutralizing antibody titer and adenovirus vector-mediated transduction efficiency following intratumoral injection. *Anticancer Res.* 32: 1145-52. (2012).
82. Nagamoto Y, Tashiro K, Takayama K, Ohashi K, Kawabata K, **Sakurai F**, Tachibana M, Hayakawa T, Furue MK, Mizuguchi H. The promotion of hepatic maturation of human pluripotent stem cells in 3D co-culture using type I collagen and Swiss 3T3 cell sheets. *Biomaterials.* 33: 4526-34. (2012).
83. Matsui H, **Sakurai F**, Katayama K, Yamaguchi T, Okamoto S, Takahira K, Tachibana M, Nakagawa S, Mizuguchi H. A hexon-specific PEGylated adenovirus vector utilizing blood coagulation factor X. *Biomaterials.* 33: 3743-55. (2012)
84. **Sakurai F**, Furukawa N, Higuchi M, Okamoto S, Ono K, Yoshida T, Kondoh M, Yagi K, Sakamoto N, Katayama K, Mizuguchi H. Suppression of hepatitis C virus replicon by adenovirus vector-mediated expression of tough decoy RNA against miR-122a. *Virus Res.* 165: 214-8. (2012)
85. Yoshida T, Takayama K, Kondoh M, **Sakurai F**, Tani H, Sakamoto N, Matsuura Y, Mizuguchi H, Yagi K. Use of human hepatocyte-like cells derived from induced pluripotent stem cells as a model for hepatocytes in hepatitis C virus infection. *Biochem Biophys Res Commun.*, 416: 119-24. (2012).
86. Iguchi K, **Sakurai F**, Tomita K, Katayama K, Yamaguchi T, Kawabata K, Tagawa M, Kawabata M, Shirakawa T, Mizuguchi H. Efficient antitumor effects of carrier cells loaded with a fiber-substituted conditionally replicating adenovirus on CAR-negative tumor cells. *Cancer Gene Ther.*, 19: 118-25. (2012).

87. Takayama K, Inamura M, Kawabata K, Katayama K, Higuchi M, Tashiro K, Nonaka A, **Sakurai F**, Hayakawa T, Furue MK, Mizuguchi H. Efficient generation of functional hepatocytes from human embryonic stem cells and induced pluripotent stem cells by HNF4 α transduction. *Mol. Ther.*, 20: 127-37. (2012).
88. Tashiro K, Kawabata K, Omori M, Yamaguchi T, **Sakurai F**, Katayama K, Hayakawa T, Mizuguchi H. Promotion of hematopoietic differentiation from mouse induced pluripotent stem cells by transient HoxB4 transduction. *Stem Cell Res.* 8: 300-11. (2012).
89. Yu D, **Sakurai F**, Corey DR. Clonal Rett Syndrome cell lines to test compounds for activation of wild-type MeCP2 expression. *Bioorg Med Chem Lett.* 21: 5202-5. (2011).
90. Takayama K, Inamura M, Kawabata K, Tashiro K, Katayama K, **Sakurai F**, Hayakawa T, Furue MK, Mizuguchi H. Efficient and directive generation of two distinct endoderm lineages from human ESCs and iPSCs by differentiation stage-specific SOX17 transduction. *PLoS One.* e21780. (2011).
91. Machitani M, Katayama K, **Sakurai F**, Matsui H, Yamaguchi T, Suzuki T, Miyoshi H, Kawabata K, Mizuguchi H. Development of an adenovirus vector lacking the expression of virus-associated RNAs. *J Control Release.* 154: 285-9. (2011).
92. Shimizu K, **Sakurai F**, Machitani M, Katayama K, Mizuguchi H. Quantitative analysis of the leaky expression of adenovirus genes in cells transduced with a replication-incompetent adenovirus vector. *Mol Pharm.* 8: 1430-5. (2011).
93. Motegi Y, Katayama K, **Sakurai F**, Kato T, Yamaguchi T, Matsui H, Takahashi M, Kawabata K, Mizuguchi H. An effective gene-knockdown using multiple shRNA-expressing adenovirus vectors. *J Control Release.* 153: 149-53. (2011).
94. Suzuki T, Sasaki T, Yano K, **Sakurai F**, Kawabata K, Kondoh M, Hayakawa T, Yagi K, Mizuguchi H. Development of a recombinant adenovirus vector production system free of replication-competent adenovirus by utilizing a packaging size limit of the viral genome. *Virus Res.* 158: 154-60. (2011).
95. Katayama K, Furuki R, Yokoyama H, Kaneko M, Tachibana M, Yoshida I, Nagase H, Tanaka K, **Sakurai F**, Mizuguchi H, Nakagawa S, Nakanishi T. Enhanced in vivo gene transfer into the placenta using RGD fiber-mutant adenovirus vector. *Biomaterials.* 32: 4185-93. (2011).
96. Sugio K, **Sakurai F***, Katayama K, Tashiro K, Matsui H, Kawabata K, Kawase A, Iwaki M, Hayakawa T, Fujiwara T, Mizuguchi H. Enhanced safety profiles of the telomerase-specific replication-competent adenovirus by incorporation of normal cell-specific microRNA-targeted sequences. *Clin Cancer Res.* 17: 2807-18. (2011). (*Corresponding author)
97. Matsui M, **Sakurai F**, Elbashir S, Foster DJ, Manoharan M, Corey DR. Activation of LDL receptor expression by small RNAs complementary to a noncoding transcript that overlaps the LDLR promoter. *Chem Biol.* 17: 1344-55. (2010).
98. Furukawa N, **Sakurai F**, Katayama K, Seki N, Kawabata K, Mizuguchi H. Optimization of a microRNA expression vector for function analysis of microRNA. *J Control Release.* 150: 94-101. (2011).

99. Suzuki-Kouyama E, Katayama K, **Sakurai F**, Yamaguchi T, Kurachi S, Kawabata K, Nakagawa S, Mizuguchi H. Hexon-specific PEGylated adenovirus vectors utilizing avidin-biotin interaction. *Biomaterials*. 32: 1724-30. (2011).
100. Inamura M, Kawabata K, Takayama K, Tashiro K, **Sakurai F**, Katayama K, Toyoda M, Akutsu H, Miyagawa Y, Okita H, Kiyokawa N, Umezawa A, Hayakawa T, Furue MK, Mizuguchi H. Efficient generation of hepatoblasts from human ES cells and iPS cells by transient overexpression of homeobox gene HEX. *Mol Ther*. 19: 400-7. (2011).
101. Yamaguchi T, Kawabata K, Kouyama E, Ishii KJ, Katayama K, Suzuki T, Kurachi S, **Sakurai F**, Akira S, Mizuguchi H. Induction of type I interferon by adenovirus-encoded small RNAs. *Proc Natl Acad Sci U S A*. 107:17286-91. (2010).
102. Matsui H, **Sakurai F**, Katayama K, Kurachi S, Tashiro K, Sugio K, Kawabata K, Mizuguchi H. Enhanced transduction efficiency of fiber-substituted adenovirus vectors by the incorporation of RGD peptides in two distinct regions of the adenovirus serotype 35 fiber knob. *Virus Res*. 155: 48-54. (2011).
103. **Sakurai F***, Nakashima K, Yamaguchi T, Ichinose T, Kawabata K, Hayakawa T, Mizuguchi H. Adenovirus serotype 35 vector-induced innate immune responses in dendritic cells derived from wild-type and human CD46-transgenic mice: Comparison with a fiber-substituted Ad vector containing fiber proteins of Ad serotype 35. *J Control Release*. 148: 212-8. (2010). (*Corresponding author)
104. Tashiro K, Kawabata K, Inamura M, Takayama K, Furukawa N, **Sakurai F**, Katayama K, Hayakawa T, Furue M, Mizuguchi H. Adenovirus vector-mediated efficient transduction into human embryonic and induced pluripotent stem cells. *Cellular Reprogramming*. 12: 501-7 (2010).
105. Ushitora M, **Sakurai F***, Yamaguchi T, Nakamura S, Kondoh M, Yagi K, Kawabata K, Mizuguchi H. Prevention of hepatic ischemia-reperfusion injury by pre-administration of catalase-expressing adenovirus vectors. *J Control Release*. 142: 431-7 (2010). (*Corresponding author)
106. Matsui H, **Sakurai F**, Kurachi S, Tashiro K, Sugio K, Kawabata K, Yamanishi K, Mizuguchi H. Development of fiber-substituted adenovirus vectors containing foreign peptides in the adenovirus serotype 35 fiber knob. *Gene Ther*. 16: 1050-7 (2009).
107. Tashiro K, Inamura M, Kawabata K, **Sakurai F**, Yamanishi K, Hayakawa T, Mizuguchi H. Efficient adipocyte and osteoblast differentiation from mouse induced-pluripotent stem cells by adenoviral transduction. *Stem cells*. 27:1802-11 (2009).
108. Tashiro K, Kondo A, Kawabata K, Sakurai H, **Sakurai F**, Yamanishi K, Hayakawa T, Mizuguchi H. Efficient osteoblast differentiation from mouse bone marrow stromal cells with polylysine-modified adenovirus vectors. *Biochem Biophys Res Commun*. 379:127-32. (2009)
109. Huang H, **Sakurai F**, Higuchi Y, Kawakami S, Hashida M, Kawabata K, Mizuguchi H. Suppressing effects of sugar-modified cationic liposome/NF-kappaB decoy complexes on adenovirus vector-induced innate immune responses. *J Control Release*. 133:139-45. (2009)
110. **Sakurai F**, Nakamura SI, Akitomo K, Shibata H, Terao K, Kawabata K, Hayakawa T, Mizuguchi H. Adenovirus serotype 35 vector-mediated transduction following direct administration into organs of nonhuman primates. *Gene Ther*. 16:297-302. (2009)

111. Suzuki T, **Sakurai F**, Nakamura S, Kouyama E, Kawabata K, Kondoh M, Yagi K, Mizuguchi H. miR-122a-regulated expression of a suicide gene prevents hepatotoxicity without altering antitumor effects in suicide gene therapy. *Mol Ther.* 16:1719-26. (2008)
112. Nakashima K, **Sakurai F**, Kawabata K, Mizuguchi H. Efficient gene delivery in human and rodent mast cells using adenovirus vectors. *J Control Release.* 129:215-22. (2008)
113. **Sakurai F**, Nakamura S, Akitomo K, Shibata H, Terao K, Kawabata K, Hayakawa T, Mizuguchi H. Transduction properties of adenovirus serotype 35 vectors after intravenous administration into nonhuman primates. *Mol Ther.* 16:726-33. (2008)
114. Sakurai H, Tashiro K, Kawabata K, Yamaguchi T, **Sakurai F**, Nakagawa S, Mizuguchi H. Adenoviral expression of suppressor of cytokine signaling-1 reduces adenovirus vector-induced innate immune responses. *J Immunol.* 180:4931-8. (2008)
115. Tashiro K, Kawabata K, Sakurai H, Kurachi S, **Sakurai F**, Yamanishi K, Mizuguchi H. Efficient adenovirus vector-mediated PPAR gamma gene transfer into mouse embryoid bodies promotes adipocyte differentiation. *J Gene Med.* 10:498-507. (2008)
116. Kanagawa N, Koretomo R, Murakami S, **Sakurai F**, Mizuguchi H, Nakagawa S, Fujita T, Yamamoto A, Okada N. Factors involved in the maturation of murine dendritic cells transduced with adenoviral vector variants. *Virology.* 374:411-20. (2008)
117. Kurachi S, Koizumi N, Tashiro K, Sakurai H, **Sakurai F**, Kawabata K, Nakagawa S, Mizuguchi H. Modification of pIX or hexon based on fiberless Ad vectors is not effective for targeted Ad vectors. *J Control Release.* 127:88-95. (2008)
118. Murakami S[#], **Sakurai F**[#], Kawabata K, Okada N, Fujita T, Yamamoto A, Hayakawa T, Mizuguchi H. Interaction of penton base Arg-Gly-Asp motifs with integrins is crucial for adenovirus serotype 35 vector transduction in human hematopoietic cells. *Gene Ther.* 14:1525-33. (2007) ([#]equally contributed)
119. Yamaguchi T, Kawabata K, Koizumi N, **Sakurai F**, Nakashima K, Sakurai H, Sasaki T, Okada N, Yamanishi K, Mizuguchi H. Role of MyD88 and TLR9 in the innate immune response elicited by serotype 5 adenoviral vectors. *Hum Gene Ther.* 18:753-62. (2007)
120. Gao JQ, Eto Y, Yoshioka Y, Sekiguchi F, Kurachi S, Morishige T, Yao X, Watanabe H, Asavatanabodee R, **Sakurai F**, Mizuguchi H, Okada Y, Mukai Y, Tsutsumi Y, Mayumi T, Okada N, Nakagawa S. Effective tumor targeted gene transfer using PEGylated adenovirus vector via systemic administration. *J Control Release.* 122:102-10. (2007)
121. Yamashita M, Ino A, Kawabata K, **Sakurai F**, Mizuguchi H. Expression of coxsackie and adenovirus receptor reduces the lung metastatic potential of murine tumor cells. *Int J Cancer.* 121:1690-6. (2007)
122. Kawabata K, Tashiro K, **Sakurai F**, Osada N, Kusuda J, Hayakawa T, Yamanishi K, Mizuguchi H. Positive and negative regulation of adenovirus infection by CAR-like soluble protein, CLSP. *Gene Ther.* 14:1199-207. (2007)
123. Kurachi S, Tashiro K, **Sakurai F**, Sakurai H, Kawabata K, Yayama K, Okamoto H, Nakagawa S, Mizuguchi H. Fiber-modified adenovirus vectors containing the TAT peptide derived from HIV-1 in the fiber knob have efficient gene transfer activity. *Gene Ther.* 14:1160-5. (2007)

124. **Sakurai F**, Akitomo K, Kawabata K, Hayakawa T, Mizuguchi H. Downregulation of human CD46 by adenovirus serotype 35 vectors. *Gene Ther.* 14:912-9. (2007)
125. Mukai E, Fujimoto S, **Sakurai F**, Kawabata K, Yamashita M, Inagaki N, Mizuguchi H. Efficient gene transfer into murine pancreatic islets using adenovirus vectors. *J Control Release.* 119:136-41. (2007)
126. Sakurai H, **Sakurai F**, Kawabata K, Sasaki T, Koizumi N, Huang H, Tashiro K, Kurachi S, Nakagawa S, Mizuguchi H. Comparison of gene expression efficiency and innate immune response induced by Ad vector and lipoplex. *J Control Release.* 117:430-7. (2007)
127. Koizumi N, Yamaguchi T, Kawabata K, **Sakurai F**, Sasaki T, Watanabe Y, Hayakawa T, Mizuguchi H. Fiber-modified adenovirus vectors decrease liver toxicity through reduced IL-6 production. *J Immunol.* 178:1767-73. (2007)
128. Mizuguchi H, Funakoshi N, Hosono T, **Sakurai F**, Kawabata K, Yamaguchi T, Hayakawa T. Rapid construction of small interfering RNA-expressing adenoviral vectors on the basis of direct cloning of short hairpin RNA-coding DNAs. *Hum Gene Ther.* 18:74-80. (2007)
129. Kurachi S, Koizumi N, **Sakurai F**, Kawabata K, Sakurai H, Nakagawa S, Hayakawa T, Mizuguchi H. Characterization of capsid-modified adenovirus vectors containing heterologous peptides in the fiber knob, protein IX, or hexon. *Gene Ther.* 14:266-74. (2007)
130. **Sakurai F**, Murakami S, Kawabata K, Okada N, Yamamoto A, Seya T, Hayakawa T, Mizuguchi H. The short consensus repeats 1 and 2, not the cytoplasmic domain, of human CD46 are crucial for infection of subgroup B adenovirus serotype 35. *J Control Release.* 113:271-8. (2006)
131. Koizumi N, Kawabata K, **Sakurai F**, Watanabe Y, Hayakawa T, Mizuguchi H. Modified adenoviral vectors ablated for coxsackievirus-adenovirus receptor, alphav integrin, and heparan sulfate binding reduce in vivo tissue transduction and toxicity. *Hum Gene Ther.* 17:264-79. (2006)
132. **Sakurai F**, Kawabata K, Koizumi N, Inoue N, Okabe M, Yamaguchi T, Hayakawa T, Mizuguchi H. Adenovirus serotype 35 vector-mediated transduction into human CD46-transgenic mice. *Gene Ther.* 13:1118-26. (2006)
133. Mizuguchi H, Xu ZL, **Sakurai F**, Kawabata K, Yamaguchi T, Hayakawa T. Efficient regulation of gene expression using self-contained fiber-modified adenovirus vectors containing the tet-off system. *J Control Release.* 110:202-11. (2005)
134. Kawabata K, **Sakurai F**, Yamaguchi T, Hayakawa T, Mizuguchi H. Efficient gene transfer into mouse embryonic stem cells with adenovirus vectors. *Mol Ther.* 12:547-54. (2005)
135. **Sakurai F**, Kawabata K, Yamaguchi T, Hayakawa T, Mizuguchi H. Optimization of adenovirus serotype 35 vectors for efficient transduction in human hematopoietic progenitors: comparison of promoter activities. *Gene Ther.* 12:1424-33. (2005)
136. Mizuguchi H, Sasaki T, Kawabata K, **Sakurai F**, Hayakawa T. Fiber-modified adenovirus vectors mediate efficient gene transfer into undifferentiated and adipogenic-differentiated human mesenchymal stem cells. *Biochem Biophys Res Commun.* 332:1101-6. (2005)

137. Hosono T, Mizuguchi H, Katayama K, Xu ZL, **Sakurai F**, Ishii-Watabe A, Kawabata K, Yamaguchi T, Nakagawa S, Mayumi T, Hayakawa T. Adenovirus vector-mediated doxycycline-inducible RNA interference. *Hum Gene Ther.* 15:813-9. (2004)
138. Koizumi N, Mizuguchi H, **Sakurai F**, Yamaguchi T, Watanabe Y, Hayakawa T. Reduction of natural adenovirus tropism to mouse liver by fiber-shaft exchange in combination with both CAR- and alpha v integrin-binding ablation. *J Virol.* 77:13062-72. (2003)
139. **Sakurai F**, Mizuguchi H, Yamaguchi T, Hayakawa T. Characterization of in vitro and in vivo gene transfer properties of adenovirus serotype 35 vector. *Mol Ther.* 8:813-21. (2003)
140. Mizuguchi H, Xu ZL, **Sakurai F**, Mayumi T, Hayakawa T. Tight positive regulation of transgene expression by a single adenovirus vector containing the rtTA and tTS expression cassettes in separate genome regions. *Hum Gene Ther.* 14:1265-77. (2003)
141. **Sakurai F**, Mizuguchi H, Hayakawa T. Efficient gene transfer into human CD34+ cells by an adenovirus type 35 vector. *Gene Ther.* 10:1041-8. (2003)
142. **Sakurai F**, Terada T, Maruyama M, Watanabe Y, Yamashita F, Takakura Y, Hashida M. Therapeutic effect of intravenous delivery of lipoplexes containing the interferon-beta gene and poly I: poly C in a murine lung metastasis model. *Cancer Gene Ther.* 10:661-8. (2003)
143. **Sakurai F**, Terada T, Yasuda K, Yamashita F, Takakura Y, Hashida M. The role of tissue macrophages in the induction of proinflammatory cytokine production following intravenous injection of lipoplexes. *Gene Ther.* 9:1120-6. (2002)
144. **Sakurai F**, Nishioka T, Yamashita F, Takakura Y, Hashida M. Effects of erythrocytes and serum proteins on lung accumulation of lipoplexes containing cholesterol or DOPE as a helper lipid in the single-pass rat lung perfusion system. *Eur J Pharm Biopharm.* 52:165-72. (2001)
145. **Sakurai F**, Nishioka T, Saito H, Baba T, Okuda A, Matsumoto O, Taga T, Yamashita F, Takakura Y, Hashida M. Interaction between DNA-cationic liposome complexes and erythrocytes is an important factor in systemic gene transfer via the intravenous route in mice: the role of the neutral helper lipid. *Gene Ther.* 8:677-86. (2001)
146. **Sakurai F**, Inoue R, Nishino Y, Okuda A, Matsumoto O, Taga T, Yamashita F, Takakura Y, Hashida M. Effect of DNA/liposome mixing ratio on the physicochemical characteristics, cellular uptake and intracellular trafficking of plasmid DNA/cationic liposome complexes and subsequent gene expression. *J Control Release.* 66:255-69. (2000)
147. Akoi A, Tottori T, **Sakurai F**, Fuji K, Miyajima K. Effects of positive charge density on the liposomal surface on disposition kinetics of liposomes in rats. *International Journal of Pharmaceutics.* 156: 163-174. (1997)

総説論文

1. **櫻井文教**, 水口裕之. ヒト iPS 細胞由来肝細胞の B 型肝炎ウイルス感染評価系への応用. *ファルマシア* 56: 1099-1103. (2020)

2. 若林圭作、**櫻井文教**、水口裕之．アデノウイルス由来小分子 RNA によるウイルス増殖促進機構の解明と遺伝子組換えウイルスへの応用．*生産と技術* 71: 10-14. (2019)
3. **櫻井文教**．ウイルスを基盤とした遺伝子治療薬の臨床開発の現状と今後の展望．*Drug Delivery System* 34: 99-105. (2019)
4. **櫻井文教**、藤原俊義、水口裕之；次世代型制限増殖アデノウイルスを利用した血中循環癌細胞検出法の開発、*Yakugaku Zasshi*. 133: 291-296. (2013).
5. 清水かほり、**櫻井文教**、立花雅史、水口 裕之；マイクロ RNA を利用してウイルス遺伝子の非特異的な発現を抑制可能な新規アデノウイルスベクターの開発、*Yakugaku Zasshi*. 132: 1407-1412. (2012)
6. 水口裕之、**櫻井文教**；ウイルスベクターと遺伝子治療、*化学療法の領域*、27、867-873. (2011)
7. Machitani M., Yamaguchi T., Shimizu K., **Sakurai F.**, Katayama K., Kawabata K., Mizuguchi H. Adenovirus vector-derived VA-RNA-mediated innate immune responses. *Pharmaceutics*, 3: 338-353. (2011).
8. **Sakurai F.**, Katayama K, Mizuguchi H. MicroRNA-regulated transgene expression systems for gene therapy and virotherapy. *Front Biosci*. 17: 2389-401. (2011).
9. Matsui H, **Sakurai F.**, Katayama K, Mizuguchi H. Development of improved adenovirus vectors and transduction into neural cells. *Nihon Yakurigaku Zasshi*. 137: 70-4. (2011).
10. **Sakurai F.**, Mizuguchi H. Development of recombinant adenovirus carrying microRNA-regulated gene expression system. *Yakugaku Zasshi*. 130: 1497-504. (2010)
11. **櫻井文教**、川端健二、水口裕之；遺伝子組換えウイルスの安全性向上に向けた遺伝子改変～microRNA による遺伝子発現制御システムを搭載した組換えウイルスの開発～．*Drug Delivery System* 24、572-581. (2009)
12. 水口裕之、**櫻井文教**、川端健二；アデノウイルスベクターの DDS、*Pharm Tech Japan*、25: 2618-2624. (2009)
13. **Sakurai F.** Development of a replication-incompetent adenovirus vector derived from subgroup B adenovirus serotype 35. *Yakugaku Zasshi*. 128: 1751-61. (2008)
14. **Sakurai F.** Development and evaluation of a novel gene delivery vehicle composed of adenovirus serotype 35. *Biol Pharm Bull*. 31: 1819-25. (2008)
15. Sakurai H, Kawabata K, **Sakurai F.**, Nakagawa S, Mizuguchi H. Innate immune response induced by gene delivery vectors. *Int J Pharm*. 354: 9-15. (2008)
16. **Sakurai F.**, Kawabata K, Mizuguchi H. Adenovirus vectors composed of subgroup B adenoviruses. *Curr Gene Ther*. 7: 229-38. (2007)
17. 川端健二、**櫻井文教**、水口裕之．改良型アデノウイルスベクターを用いた遺伝子デリバリー．*Drug Delivery System*. 22(2): 148-154. (2007)
18. **Sakurai F.**, Kawabata K, Mizuguchi H. Characterization of adenovirus serotype 35 vectors using genetically modified animals and non-human primates. *Yakugaku Zasshi*. 126: 1013-9. (2006)
19. Kawabata K, **Sakurai F.**, Koizumi N, Hayakawa T, Mizuguchi H. Adenovirus vector-mediated gene transfer into stem cells. *Mol Pharm*. 3: 95-103. (2006)

20. 櫻井文教、水口裕之. 新しいアデノウイルスベクターの開発. *バイオサイエンスとインダストリー* 64: 11-16. (2006)
21. Xu ZL, Mizuguchi H, Sakurai F, Koizumi N, Hosono T, Kawabata K, Watanabe Y, Yamaguchi T, Hayakawa T. Approaches to improving the kinetics of adenovirus-delivered genes and gene products. *Adv Drug Deliv Rev.* 57: 781-802. (2005)
22. 水口裕之、川端健二、櫻井文教、早川堯夫. 改良型アデノウイルスベクターを用いた造血幹細胞、間葉系幹細胞、ES 細胞への高効率遺伝子導入、*炎症・再生 (日本炎症・再生医学会学会誌)* 25: 447-451 (2005)

著書

1. 水口裕之、櫻井文教. ウイルスベクターと遺伝子治療. 柳雄介、堤裕幸編集. *新編ウイルスの今日的意味. 医薬ジャーナル.* 101-108 (2012).
2. 櫻井文教、水口裕之. microRNA による遺伝子発現制御システムを搭載したアデノウイルスベクターの開発. *遺伝子医薬MOOK. 臨床・創薬利用が見えてきた microRNA.* 182-187. (2012).
3. 櫻井文教、水口裕之. microRNA による遺伝子発現制御システムを搭載した遺伝子発現ベクター. *ドラッグデリバリーシステムの新展開II.* 47-52 (2012).
4. 水口裕之、櫻井文教、川端健二. カプシドタンパク質改変アデノウイルスベクター. *遺伝子医学MOOK 別冊 絵で見てわかるナノ DDS.* 235-242 (2007)
5. Sakurai F, Takakura Y, and Hashida M. Evaluation of immune response after administration of plasmid DNA-nonviral vector complex. In: Taira K, Kataoka K (eds) *Non-viral Gene Therapy: Gene Design and Delivery.* Springer-Verlag Tokyo. pp339-347 (2005).

解説等

1. 櫻井文教. アデノウイルスってどんなものでしたっけ? 日経メディカル. オンライン掲載 (2021)
2. 塚本智仁, 酒井英子, 櫻井文教, 水口裕之. CHOPCHOP v3 を用いた CRISPR-Cas9 の標的配列検索方法. *Drug Delivery System* 35: 257-259.(2020)
3. 櫻井文教、近藤昌夫. ウイルスを利用した医療・創薬研究の新展開-ウイルスは貴重なバイオマテリアル-. *Yakugaku Zasshi*, 133: 289. (2013)
4. 櫻井文教. 組織特異的かつ長期安定的な遺伝子発現を目指した新規アデノウイルスベクターの開発. *Drug Delivery System.* 26: 502-509. (2011).
5. Sakurai F, Nishikawa M. Development of cellular and gene therapy products for bioactive protein-based therapy. *Yakugaku Zasshi.* 130: 1487-8. (2010).
6. 櫻井文教. 35型アデノウイルスを基本骨格とした新規遺伝子導入ベクターの開発および機能評価に関する研究. *薬事日報.* 2008年3月21日
7. 櫻井文教. ウイルスベクター. *Drug Delivery System* 22(2): 154 (2007)
8. 櫻井文教、川端健二. INTERVIEW 創薬・創剤人. *PHARM TECH JAPAN* 22(9): 18-19. (2006)
9. 櫻井文教. 高性能な遺伝子導入ベクターの開発を目指して. *Drug Delivery System* 20: 474-475 (2005)