

**BIBLIOGRAPHY**

1. Fu, X., Besterman, J.M., Monosov, A., and Hoffman, R.M. Models of human metastatic colon cancer in nude mice orthotopically constructed by using histologically intact patient specimens. *Proc. Natl. Acad. Sci. USA* **88**, 9345-9349, 1991.
2. Fu, X., Guadagni, F., and Hoffman, R.M. A metastatic nude-mouse model of human pancreatic cancer constructed orthotopically from histologically intact patient specimens. *Proc. Natl. Acad. Sci. USA* **89**, 5645-5649, 1992.
3. Wang, X., Fu, X., and Hoffman, R.M. A new patient-like metastatic model of human lung cancer constructed orthotopically with intact tissue via thoracotomy in immunodeficient mice. *Int. J. Cancer* **51**, 992-995, 1992.
4. Fu, X., and Hoffman, R.M. Human ovarian carcinoma metastatic models constructed in nude mice by orthotopic transplantation of histologically-intact patient specimens. *Anticancer Res.* **13**, 283-286, 1993.
5. Fu, X., Le, P. and Hoffman, R.M. A metastatic-orthotopic transplant nude-mouse model of human patient breast cancer. *Anticancer Res.* **13**, 901-904, 1993.
6. Furukawa, T., Kubota, T., Watanabe, M., Kitajima, M., Fu, X. and Hoffman, R.M. Orthotopic transplantation of histologically intact clinical specimens of stomach cancer to nude mice: correlation of metastatic sites in mouse and individual patient donors. *Int. J. Cancer* **53**, 608-612, 1993.
7. Astoul, P., Colt, H.G., Wang, X., and Hoffman, R.M. Metastatic human pleural ovarian cancer model constructed by orthotopic implantation of fresh histologically-intact patient carcinoma in nude mice. *Anticancer Res.* **13**, 1999-2002, 1993.
8. Astoul, P., Wang, X., and Hoffman, R.M. "Patient-like" nude- and SCID-mouse models of human lung and pleural cancer (Review). *Int. J. Oncology* **3**, 713-718, 1993.
9. Astoul, P., Colt, H.G., Wang, X., and Hoffman, R.M. A "patient-like" nude mouse model of parietal pleural human lung adenocarcinoma. *Anticancer Res.* **14**, 85-91, 1994.
10. Astoul, P., Colt, H.G., Wang, X., Boutin, C. and Hoffman, R.M. "Patient-like" nude mouse metastatic model of advanced human pleural cancer. *Journal of Cellular Biochemistry* **56**, 9-15, 1994.
11. Togo, S., Wang, X., Shimada, H., Moossa, A.R., and Hoffman, R.M. Cancer seed and soil can be highly selective: Human-patient colon tumor lung metastasis grows in nude mouse lung but not colon or subcutis. *Anticancer Res.* **15**, 795-798, 1995.
12. Astoul, P., Wang, X., Colt, H.G., Boutin, C., and Hoffman, R.M. A patient-like human malignant pleural mesothelioma nude-mouse model. *Oncology Reports* **3**, 483-487, 1996.
13. Riordan, T. A technique is said to ease attachment of tumors to mice, making them 'little cancer patients.' *New York Times*, "Patents" Column, March 4, 1996.
14. Holzman, D. Of mice and metastasis: A new for-profit model emerges. *J. Natl. Cancer Inst.* **88**, 396-397, 1996.
15. Hoffman, R.M. Orthotopic metastatic mouse models for anticancer drug discovery and evaluation: a bridge to the clinic. *Investigational New Drugs* **17**, 343-359, 1999.
16. Garber, K. Realistic rodents? Debate grows over new mouse models of cancer. *J. Natl. Cancer Inst.* **98**, 1176-1178, 2006.
17. Lukashev, M., LePage, D., Wilson, C., Bailly, V., Garber, E., Lukashin, A., Ngam-ek, A., Zeng, W., Allaire, N., Perrin, S., Xu, X., Szeliga, K., Wortham, K., Kelly, R., Bottiglio, C., Ding, J., Griffith, L., Heaney, G., Silverio, E., Yang, W., Jarpe, M., Fawell, S., Reff, M., Carmillo, A., Miatkowski, K., Amatucci, J., Crowell, T., Prentice, H., Meier, W., Violette, S.M., Mackay, F., Yang, D., Hoffman, R., and Browning, J.L. Targeting the lymphotoxin- $\beta$  receptor with agonist antibodies as a potential cancer therapy. *Cancer Research* **66**, 9617-9624, 2006.
18. Kaushal, S., McElroy, M.K., Luiken, G.A., Talamini, M.A., Moossa, A.R., Hoffman, R.M., and Bouvet, M. Fluorophore-conjugated anti-CEA antibody for the intraoperative imaging of pancreatic and colorectal cancer. *J. Gastrointest. Surg.* **12**, 1938-1950, 2008.
19. Soda, Y., Marumoto, T., Friedmann-Morvinski, D., Soda, M., Liu, F., Michiue, H., Pastorino, S., Yang, M., Hoffman, R.M., Kesari, S., Verma, I.M. Transdifferentiation of glioblastoma cells into vascular endothelial cells. *Proc. Natl. Acad. Sci. USA* **108**, 4274-4280, 2011.
20. Suetsugu, A., Katz, M., Fleming, J., Moriwaki, H., Bouvet, M., Saji, S., and Hoffman, R.M. Multi-color palette of fluorescent proteins for imaging the tumor microenvironment of orthotopic tumorgraft mouse models of clinical pancreatic cancer specimens. *J. Cell. Biochem.* **113**, 2290-2295, 2012.
21. Suetsugu, A., Katz, M., Fleming, J., Truty, M., Thomas, R., Saji, S., Moriwaki, H., Bouvet, M., and Hoffman, R.M. Imageable fluorescent metastasis resulting in transgenic GFP mice orthotopically implanted with human-patient primary pancreatic cancer specimens. *Anticancer Research* **32**, 1175-1180, 2012.
22. Suetsugu, A., Katz, M., Fleming, J., Truty, M., Thomas, R., Saji, S., Moriwaki, H., Bouvet, M., and Hoffman, R.M. Non-invasive fluorescent-protein imaging of orthotopic pancreatic-cancer-patient tumorgraft progression in nude mice. *Anticancer Research* **32**, 3063-3068, 2012.

23. Hiroshima, Y., Maawy, A., Sato, S., Murakami, T., Uehara, F., Miwa, S., Yano, S., Momiyama, M., Chishima, T., Tanaka, K., Bouvet, M., Endo, I., and Hoffman, R.M. Hand-held high-resolution fluorescence imaging system for fluorescence-guided surgery of patient and cell-line pancreatic tumors growing orthotopically in nude mice. *J. Surg. Res.* **187**, 510-517, 2014.
24. Metildi, C.A., Kaushal, S., Luiken, G.A., Talamini, M.A., Hoffman, R.M., and Bouvet, M. Fluorescently-labeled chimeric anti-CEA antibody improves detection and resection of human colon cancer in a patient-derived orthotopic xenograft (PDOX) nude mouse model. *J Surg. Oncol.* **109**, 451-458, 2014.
25. Hiroshima, Y., Maawy, A., Metildi, C.A., Zhang, Y., Uehara, F., Miwa, S., Yano, S., Sato, S., Murakami, T., Momiyama, M., Chishima, T., Tanaka, K., Bouvet, M., Endo, I., and Hoffman, R.M. Successful fluorescence-guided surgery on human colon cancer patient-derived orthotopic xenograft mouse models using a fluorophore-conjugated anti-CEA antibody and a portable imaging system. *J. Laparoendosc. Adv. Surg. Tech. A* **24**, 241-247, 2014.
26. Hiroshima, Y., Zhao, M., Maawy, A., Zhang, Y., Katz, M.H., Fleming, J.B., Uehara, F., Miwa, S., Yano, S., Momiyama, M., Suetsugu, A., Chishima, T., Tanaka, K., Bouvet, M., Endo, I., and Hoffman, R.M. Efficacy of *Salmonella typhimurium* A1-R versus chemotherapy on a pancreatic cancer patient-derived orthotopic xenograft (PDOX). *J. Cell. Biochem.* **115**, 1254-1261, 2014.
27. Hiroshima, Y., Maawy, A., Zhang, Y., Murakami, T., Momiyama, M., Mori, R., Matsuyama, R., Katz, M.H., Fleming, J.B., Chishima, T., Tanaka, K., Ichikawa, Y., Endo, I., Hoffman, R.M., and Bouvet, M. Metastatic recurrence in a pancreatic cancer patient derived orthotopic xenograft (PDOX) nude mouse model is inhibited by neoadjuvant chemotherapy in combination with fluorescence-guided surgery with an anti-CA 19-9-conjugated fluorophore. *PLoS One* **9**, e114310, 2014.
28. Hiroshima, Y., Zhang, Y., Murakami, T., Maawy, A.A., Miwa, S., Yamamoto, M., Yano, S., Sato, S., Momiyama, M., Mori, R., Matsuyama, R., Chishima, T., Tanaka, K., Ichikawa, Y., Bouvet, M., Endo, I., Zhao, M., and Hoffman, R.M. Efficacy of tumor-targeting *Salmonella typhimurium* A1-R in combination with anti-angiogenesis therapy on a pancreatic cancer patient-derived orthotopic xenograft (PDOX) and cell line mouse models. *Oncotarget* **5**, 12346-12357, 2014.
29. Hiroshima, Y., Zhang, Y., Zhang, M., Maawy, A., Mii, S., Yamamoto, M., Uehara, F., Miwa, S., Yano, S., Murakami, T., Momiyama, M., Chishima, T., Tanaka, K., Ichikawa, Y., Bouvet, M., Murata, T., Endo, I., and Hoffman, R.M. Establishment of a patient-derived orthotopic xenograft (PDOX) model of HER-2-positive cervical cancer expressing the clinical metastatic pattern. *PLOS ONE* **10**, e0117417, 2015.
30. Hiroshima, Y., Zhang, Y., Zhang, N., Uehara, F., Maawy, A., Murakami, T., Mii, S., Yamamoto, M., Miwa, S., Yano, S., Momiyama, M., Mori, R., Matsuyama, R., Chishima, T., Tanaka, K., Ichikawa, Y., Bouvet, M., Endo, I., and Hoffman, R.M. Patient-derived orthotopic xenograft (PDOX) nude mouse model of soft-tissue sarcoma more closely mimics the patient behavior in contrast to the subcutaneous ectopic model. *Anticancer Research* **35**, 697-701, 2015.
31. Hiroshima, Y., Maawy, A.A., Katz, M.H., Fleming, J.B., Bouvet, M., Endo, I., and Hoffman, R.M. Selective efficacy of zoledronic acid on metastasis in a patient-derived orthotopic xenograft (PDOX) nude-mouse model of human pancreatic cancer. *J. Surg. Oncol.* **111**, 311-315, 2015.
32. Hiroshima, Y., Maawy, A., Zhan, Y., Murakami, T., Momiyama, M., Mori, R., Matsuyama, R., Chishima, T., Tanaka, K., Ichikawa, Y., Endo, I., Hoffman, R.M., and Bouvet, M. Fluorescence-guided surgery, but not bright-light surgery, prevents local recurrence in a pancreatic cancer patient-derived orthotopic xenograft (PDOX) model resistant to neoadjuvant chemotherapy (NAC). *Pancreatology* **15**, 295-301, 2015.
33. Hoffman, R.M. Patient-derived orthotopic xenografts: better mimic of metastasis than subcutaneous xenografts. *Nature Reviews Cancer* **15**, 451-452, 2015.
34. Yano, S., Hiroshima, Y., Maawy, A., Kishimoto, H., Suetsugu, A., Miwa, S., Toneri, M., Yamamoto, M., Katz, M.H.G., Fleming, J.B., Urata, Y., Tazawa, H., Kagawa, S., Bouvet, M., Fujiwara, T., and Hoffman, R.M. Color-coding cancer and stromal cells with genetic reporters in a patient-derived orthotopic xenograft (PDOX) model of pancreatic cancer enhances fluorescence-guided surgery. *Cancer Gene Therapy* **22**, 344-350, 2015.
35. Hiroshima, Y., Zhao, M., Zhang, Y., Zhang, N., Maawy, A., Murakami, T., Mii, S., Uehara, F., Yamamoto, M., Miwa, S., Yano, S., Momiyama, M., Mori, R., Matsuyama, R., Chishima, T., Tanaka, K., Ichikawa, Y., Bouvet, M., Endo, I., and Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R arrests a chemo-resistant patient soft-tissue sarcoma in nude mice. *PLoS One* **10**, e0134324, 2015.
36. Hiroshima, Y., Zhang, Y., Zhao, M., Zhang, N., Murakami, T., Maawy, A., Mii, S., Uehara, F., Yamamoto, M., Miwa, S., Yano, S., Momiyama, M., Mori, R., Matsuyama, R., Chishima, T., Tanaka, K., Ichikawa, Y., Bouvet, M., Endo, I., and Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R in combination with Trastuzumab eradicates HER-2-positive cervical cancer cells in patient-derived mouse models. *PLoS One* **10**, e0120358, 2015.
37. Jun, E., Jung, J., Jeong, S-Y., Choi, E.K., Kim, M. B., Lee, J. S., Hong, S-M., Seol, H. S., Hwang, C., Hoffman, R.M., Shim, I. K., Chang, S., and Kim, S. C. Surgical and oncological factors affecting the successful engraftment of patient-derived xenografts in pancreatic ductal adenocarcinoma. *Anticancer Res.* **36**, 517-522, 2016.

38. Murakami, T., DeLong, J., Eilber, F.C., Zhao, M., Zhang, Y., Zhang, N., Singh, A., Russell, T., Deng, S., Reynoso, J., Quan, C., Hiroshima, Y., Matsuyama, R., Chishima, T., Tanaka, K., Bouvet, M., Chawla, S., Endo, I., and Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R in combination with doxorubicin eradicate soft tissue sarcoma in a patient-derived orthotopic xenograft PDOX model. *Oncotarget* **7**, 12783-12790, 2016.
39. Kiyuna, T., Murakami, T., Tome, Y., Kawaguchi, K., Igarashi, K., Zhang, Y., Zhao, M., Li, Y., Bouvet, M., Kanaya, F., Singh, A., Dry, S., Eilber, F.C., and Hoffman, R.M. High efficacy of tumor-targeting *Salmonella typhimurium* A1-R on a doxorubicin- and dactolisib-resistant follicular dendritic-cell sarcoma in a patient-derived orthotopic xenograft PDOX nude mouse model. *Oncotarget* **7**, 33046-33054, 2016.
40. Hoffman, R.M., and Bouvet, M. Imaging the microenvironment of pancreatic cancer patient-derived orthotopic xenografts (PDOX) growing in transgenic nude mice expressing GFP, RFP, or CFP. *Cancer Letters (Special Issue: Tumor Microenvironment. Singh, Shree Ram, ed.)*, **380**, 349-355, 2016.
41. Yamamoto, M., Zhao, M., Hiroshima, Y., Zhang, Y., Shurell, E., Eilber, F.C., Bouvet, M., Noda, M., Hoffman, R.M. Efficacy of tumor-targeting *Salmonella typhimurium* A1-R on a melanoma patient-derived orthotopic xenograft (PDOX) nude-mouse model. *PLoS One* **11**, e0160882, 2016.
42. Murakami, T., Singh, A.S., Kiyuna, T., Dry, S.M., Li, Y., James, A.W., Igarashi, K., Kawaguchi, K., DeLong, J.C., Zhang, Y., Hiroshima, Y., Russell, T., Eckardt, M.A., Yanagawa, J., Federman, N., Matsuyama, R., Chishima, T., Tanaka, K., Bouvet, M., Endo, I., Eilber, F.C., and Hoffman, R.M. Effective molecular targeting of *CDK4/6* and IGF-1R in a rare *FUS-ERG* fusion *CDKN2A*-deletion doxorubicin-resistant Ewing's sarcoma in a patient-derived orthotopic xenograft (PDOX) nude-mouse model. *Oncotarget* **7**, 47556-47564, 2016.
43. Hiroshima, Y., Maawy, A., Zhang, Y., Zhang, N., Murakami, T., Chishima, T., Tanaka, K., Ichikawa, Y., Bouvet, M., Endo, I., Hoffman, R.M. Patient-derived mouse models of cancer need to be orthotopic in order to evaluate targeted anti-metastatic therapy. *Oncotarget* **7**, 71696-71702, 2016.
44. Kawaguchi, K., Murakami, T., Chmielowski, B., Igarashi, K., Kiyuna, T., Unno, M., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Eilber, F.C., and Hoffman, R.M. Vemurafenib-resistant BRAF-V600E mutated melanoma is regressed by MEK targeting drug trametinib, but not cobimetinib in a patient-derived orthotopic xenograft (PDOX) mouse model. *Oncotarget* **7**, 71737-71743, 2016.
45. Kawaguchi, K., Igarashi, K., Murakami, T., Chmielowski, B., Kiyuna, T., Zhao, M., Zhang, Y., Singh, A., Unno, M., Nelson, S.D., Russell, T., Dry, S.M., Li, Y., Eilber, F.C., Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R combined with Temozolomide regresses malignant melanoma with a BRAF-V600 mutation in a patient-derived orthotopic xenograft (PDOX) model. *Oncotarget* **7**, 85929-85936, 2016.
46. Hoover, M., Adamian, Y., Brown, M., Maawy, A., Chang, A., Lee, J., Gharibi, A., Katz, M.H., Fleming, J., Hoffman, R.M., Bouvet, M., Doebler, R., and Kelber J.A. A novel method for RNA extraction from FFPE samples reveals significant differences in biomarker expression between orthotopic and subcutaneous pancreatic cancer patient-derived xenografts. *Oncotarget* **8**, 5885-5894, 2017. **(Cover story)**
47. Murakami, T., Murata, T., Kawaguchi, K., Kiyuna, T., Igarashi, K., Hwang, H.K., Hiroshima, Y., Hozumi, C., Komatsu, S., Kikuchi, T., Lwin, T.M., DeLong, J.C., Miyake, K., Zhang, Y., Tanaka, K., Bouvet, M., Endo, I., Hoffman, R.M. Cervical cancer patient-derived orthotopic xenograft (PDOX) is sensitive to cisplatin and resistant to nab-paclitaxel. *Anticancer Research* **37**, 61-66, 2017.
48. Kiyuna, T., Murakami, T., Tome, Y., Igarashi, K., Kawaguchi, K., Russell, T., Eckhardt, M.A., Crompton, J., Singh, A., Bernthal, N., Bukata, S., Federman, N., Kanaya, F., Eilber, F.C., and Hoffman, R.M. Labeling the stroma of a patient-derived orthotopic xenograft (PDOX) mouse models of undifferentiated pleomorphic soft-tissue sarcoma with red fluorescent protein for rapid non-invasive drug screening. *J. Cell. Biochem.* **118**, 361-365, 2017.
49. Murakami, T., Igarashi, K., Kawaguchi, K., Kiyuna, T., Zhang, Y., Zhao, M., Hiroshima, Y., Nelson, S.D., Dry, S.M., Li, Y., Yanagawa, J., Russell, T., Federman, N., Singh, A., Elliott, I., Matsuyama, R., Chishima, T., Tanaka, K., Endo, I., Eilber, F.C., and Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R regresses an osteosarcoma in a patient-derived xenograft model resistant to a molecular-targeting drug. *Oncotarget* **8**, 8035-8042, 2017.
50. Igarashi, K., Kawaguchi, K., Kiyuna, T., Murakami, T., Miwa, S., Nelson, S.D., Dry, S.M., Li, Y., Singh, A., Kimura, H., Hayashi, K., Yamamoto, N., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Patient-derived orthotopic xenograft (PDOX) mouse model of adult rhabdomyosarcoma invades and recurs after resection in contrast to the subcutaneous ectopic model. *Cell Cycle* **16**, 91-94, 2017.
51. Bouvet, M., Hoffman, R.M. Curative fluorescence guided surgery of gastrointestinal cancers developed in patient derived orthotopic xenograft mouse models. *J. Fluores Guided Surg.* **1**, 5-16, 2017.
52. Murakami, T., Li, S., Han, Q., Tan, Y., Kiyuna, T., Igarashi, K., Kawaguchi, K., Hwang, H.K., Miyaki, K., Singh, A.S., Nelson, S.D., Dry, S.M., Li, Y., Hiroshima, Y., Lwin, T.M., DeLong, J.C., Chishima, T., Tanaka, K., Bouvet, M., Endo, I., Eilber, F.C.,

- and Hoffman, R.M. Recombinant methioninase effectively targets a Ewing's sarcoma in a patient-derived orthotopic xenograft (PDOX) nude-mouse model. *Oncotarget* **8**, 35630-35638, 2017.
53. Kawaguchi, K., Igarashi, K., Murakami, T., Kiyuna, T., Nelson, S.D., Dry, S.M., Li, Y., Russell, T.A., Singh, A.S., Chmielowski, B., Unno, M., Eilber, F.C., and Hoffman, R.M. Combination of gemcitabine and docetaxel regresses both gastric leiomyosarcoma proliferation and invasion in an imageable patient-derived orthotopic xenograft (iPDOX) model. *Cell Cycle* **16**, 1063-1069, 2017.
54. Igarashi, K., Kawaguchi, K., Murakami, T., Kiyuna, T., Miyake, K., Nelson, S.D., Dry, S.M., Li, Y., Yanagawa, J., Russell, T.A., Singh, A., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Intra-arterial administration of tumor-targeting *Salmonella typhimurium* A1-R regresses a cisplatin-resistant relapsed osteosarcoma in a patient-derived orthotopic xenograft (PDOX) mouse model. *Cell Cycle* **16**, 1164-1170, 2017.
55. Kawaguchi, K., Igarashi, K., Murakami, T., Zhao, M., Zhang, Y., Chmielowski, B., Kiyuna, T., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Unno, M., Eilber, F.C., and Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R sensitizes melanoma with a BRAF-V600E mutation to vemurafenib in a patient-derived orthotopic xenograft (PDOX) nude mouse model. *J. Cell. Biochem.* **118**, 2314-2319, 2017.
56. Murakami, T., Kiyuna, T., Kawaguchi, K., Igarashi, K., Singh A.S., Hiroshima, Y., Zhang Y., Zhao, M., Miyake, K., Nelson S.D., Dry, S.M., Li, Y., DeLong, J.C., Lwin, T.M., Chishima, T., Tanaka, K., Bouvet, M., Endo, I., Eilber, F.C., and Hoffman, R.M. The irony of highly-effective bacterial therapy of a patient-derived orthotopic xenograft (PDOX) model of Ewing's sarcoma, which was blocked by Ewing himself 80 years ago. *Cell Cycle* **16**, 1046-1052, 2017.
57. Igarashi, K., Kawaguchi, K., Murakami, T., Kiyuna, T., Miyake, K., Singh, A., Nelson, S.D., Dry, S.M., Li, Y., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. High efficacy of pazopanib on an undifferentiated spindle-cell sarcoma resistant to first-line therapy is identified with a patient-derived orthotopic xenograft (PDOX) nude mouse model. *J. Cell. Biochem.* **118**, 2739-3743, 2017.
58. Kawaguchi, K., Igarashi, K., Murakami, T., Kiyuna, T., Lwin, T., Hwang, H-K., DeLong, J., Clary, B., Bouvet, M., Unno, M., and Hoffman, R.M. MEK inhibitors cobimetinib and trametinib, regressed a gemcitabine-resistant pancreatic cancer patient-derived orthotopic xenograft (PDOX). *Oncotarget* **8**, 47490-47496, 2017.
59. Kiyuna, T., Murakami, T., Tome, Y., Kawaguchi, K., Igarashi, K., Miyake, K., Kanaya, F., Singh, A., Eilber, F.C., and Hoffman, R.M. Analysis of stroma labeling during multiple passage of a sarcoma imageable patient-derived orthotopic xenograft (iPDOX) in red fluorescent protein transgenic nude mice. *J Cell. Biochem.* **118**, 3367-3371, 2017.
60. Kawaguchi, K., Igarashi, K., Chmielowski, B., Murakami, T., Kiyuna, T., Zhao, M., Zhang, Y., Nelson, S.D., Russell, T.A., Dry, S.M., Singh, A.S., Li, Y., Unno, M., Eilber, F.C., and Hoffman, R.M. *Salmonella typhimurium* A1-R targeting of a chemotherapy resistant BRAF-V600E melanoma in a patient-derived orthotopic xenograft (PDOX) model is enhanced in combination with either vemurafenib or temozolomide. *Cell Cycle* **16**, 1288-1294, 2017.
61. Hoffman, R.M., ed. Patient-Derived Mouse Models of Cancer. Molecular and Translational Medicine. Coleman, W.B., Tsongalis, G.J., Series eds. Springer Intl. Publishing AG, 2017. ISSN:2197-7852.
62. Hoffman, R.M. Patient-derived orthotopic xenografts (PDOX) models of melanoma. Special Issue "Animal Models of Melanoma", Slominski, A., Guest Editor. *Intl J. Mol. Sci.* **18**, 1875, 2017. DOI: 10.3390/ijms18091875
63. Igarashi, K., Murakami, T., Kawaguchi, K., Kiyuna, T., Miyake, K., Zhang, Y., Nelson, S.D., Dry, S.M., Li, Y., Yanagawa, J., Russell, T.A., Singh, A.S., Tsuchiya, H., Elliott I., Eilber, F.C., and Hoffman, R.M. A patient-derived orthotopic xenograft (PDOX) mouse model of an cisplatin-resistant osteosarcoma lung metastasis that was sensitive to temozolomide and trabectedin: implications for precision oncology. *Oncotarget* **8**, 62111-62119, 2017.
64. Igarashi, K., Kawaguchi, K., Kiyuna, T., Murakami, T., Miwa, S., Nelson, S.D., Dry, S.M., Li, Y., Singh, A., Kimura, H., Hayashi, K., Yamamoto, N., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Temozolomide combined with irinotecan caused regression in an adult pleomorphic rhabdomyosarcoma patient-derived orthotopic xenograft (PDOX) nude-mouse model. *Oncotarget* **8**, 75874-75880, 2017.
65. Igarashi, K., Kawaguchi, K., Murakami, T., Kiyuna, T., Miyake, K., Yamamoto, N., Hayashi, K., Kimura, H., Nelson, S.D., Dry, S.M., Li, Y., Singh, A., Miwa, S., Odani, A., Eilber, F.C., Tsuchiya, H., Hoffman, R.M. A novel anionic-phosphate-platinum complex effectively targets an undifferentiated pleomorphic sarcoma better than cisplatin and doxorubicin in a patient-derived orthotopic xenograft (PDOX). *Oncotarget* **8**, 63353-63359, 2017.
66. Kawaguchi, K., Igarashi, K., Li, S., Han, Q., Tan, Y., Kiyuna, T., Miyake, Y., Murakami, T., Chmielowski, B., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Unno, M., Eilber, F.C., and Hoffman, R.M. Combination treatment with recombinant methioninase enables temozolomide to arrest a BRAF V600E melanoma growth in a patient-derived orthotopic xenograft. *Oncotarget* **8**, 85516-85525, 2017.
67. Miyake, K., Murakami, T., Kiyuna, T., Igarashi, K., Kawaguchi, K., Miyake, M., Li, Y., Nelson, S.D., Dry, S.M., Bouvet, M., Elliott, I.A., Russell, T.A., Singh, A.S., Eckardt, M.A., Hiroshima, Y., Momiyama, M., Matsuyama, R., Chishima, T., Endo, I., Eilber, F.C., Hoffman, R.M. The combination of temozolomide-irinotecan regresses a doxorubicin-resistant patient-derived

- orthotopic xenograft (PDOX) nude-mouse model of recurrent Ewing's sarcoma with a *FUS-ERG* fusion and *CDKN2A* deletion: Direction for third-line patient therapy. *Oncotarget* **8**, 103129-103136, 2017.
68. Kawaguchi, K., Igarashi, K., Li, S., Han, Q., Tan, Y., Miyake, K., Kiyuna, T., Miyake, M., Murakami, T., Chmielowski, S., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Unno, M., Eilber, F.C., Hoffman, R.M. Recombinant methioninase (rMETase) is an effective therapeutic for BRAF-V600E-negative as well as -positive melanoma in patient-derived orthotopic xenograft (PDOX) mouse models. *Oncotarget* **9**, 915-923, 2018.
69. Igarashi, K., Kawaguchi, K., Li, S., Han, Q., Tan, Y., Murakami, T., Kiyuna, T., Miyake, K., Miyake, M., Singh, A.S., Eckhardt, M.A., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Singh, R.S., Eilber, F.C., Hoffman, R.M. Recombinant methioninase in combination with DOX overcomes first-line DOX resistance in a patient-derived orthotopic xenograft nude-mouse model of undifferentiated spindle-cell sarcoma. *Cancer Letters* **417**, 168-173, 2018.
70. Miyake, K., Murakami, T., Kiyuna, T., Igarashi, K., Kawaguchi, K., Li, Y., Singh, A.S., Dry, S.M., Eckardt, M.A., Hiroshima, Y., Momiyama, M., Matsuyama, R., Chishima, T., Endo, I., Eilber, F.C., and Hoffman, R.M. Eribulin regresses a doxorubicin-resistant Ewing's sarcoma with a *FUS-ERG* fusion and *CDKN2A*-deletion for the patient-derived orthotopic xenograft (PDOX) nude mouse model. *J. Cell. Biochem.* **119**, 967-972, 2018.
71. Fang, T., Huang, H., Li, X., Liao, J., Yang, Z., Hoffman, R.M., Cheng, X., Liang, L., Hu, W., Yun, S. Tumor progression in patient-derived xenograft of non-small cell lung cancer is inhibited by sirNA silencing of *TUG1* and *LCAL6* long non-coding RNAs. *Anticancer Research* **38**, 179-186, 2018.
72. Igarashi, K., Kawaguchi, K., Kiyuna, T., Miyake, K., Miyake, M., Li, Y., Nelson, S.D., Dry, S.M., Singh, A.S., Elliott, I., Russell, T.A., Eckhardt, M.A., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Temozolomide combined with irinotecan regresses a cisplatin-resistant relapsed osteosarcoma in a patient-derived orthotopic xenograft (PDOX) precision-oncology mouse model. *Oncotarget* **9**, 7774-7781, 2018.
73. Jun, E., Hong, S-M., Yoo, H.J., Kim, M.B., Won, J.S., An, S., Shim, I.K., Chang, S., Hoffman, R.M., Kim, S.C. Molecular-genetic and metabolic comparison of orthotopic and heterotopic patient-derived pancreatic-cancer xenografts to the original patient tumors. *Oncotarget* **9**, 7867-7881, 2018.
74. Igarashi, K., Li, S., Han, Q., Tan, Y., Kawaguchi, K., Murakami, T., Kiyuna, T., Miyake, K., Li, Y., Nelson, S.D., Dry, S.M., Singh, A.S., Elliott, I., Russell, T.A., Eckhardt, M.A., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Growth of a doxorubicin-resistant undifferentiated spindle-cell sarcoma PDOX is arrested by metabolic targeting with recombinant methioninase. *J. Cell. Biochem.* **119(4)**, 3537-3544, 2018.
75. Igarashi, K., Kawaguchi, K., Kiyuna, T., Miyake, K., Miyake, M., Singh, A.S., Eckhardt, M.A., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R is a highly effective general therapeutic for undifferentiated soft tissue sarcoma in patient-derived orthotopic xenograft (PDOX) nude-mouse models. *Biochem. Biophys. Res. Comm.* **497**, 1055-1061, 2018.
76. Kawaguchi, K., Han, Q., Li, S., Tan, Y., Igarashi, K., Miyake, K., Kiyuna, T., Miyake, M., Chmielowski, B., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Singh, A.S., Eckardt, M.A., Unno, M., Eilber, F.C., Hoffman, R.M. Intra-tumor L-methionine level highly correlates with tumor size in both pancreatic cancer and melanoma patient-derived orthotopic xenograft (PDOX) nude-mouse models. *Oncotarget* **9**, 11119-11125, 2018.
77. Suetsugu, A., Shimizu, M., Saji, S., Moriwaki, H., Hoffman, R.M. Visualizing the tumor microenvironment (TME) by color-coded imaging in orthotopic mouse models of cancer. *Anticancer Research* **38**, 1847-1857, 2018.
78. Kawaguchi, K., Han, Q., Li, S., Tan, Y., Igarashi, K., Kiyuna, T., Miyake, K., Miyake, M., Chmielowski, B., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Eckhardt, M.A., Unno, M., Eilber, F.C., Hoffman, R.M. Targeting methionine with oral recombinant methioninase (o-rMETase) arrests a patient-derived orthotopic xenograft (PDOX) model of BRAF-V600E mutant melanoma: implications for clinical cancer therapy and prevention. *Cell Cycle* **17**, 356-361, 2018.
79. Miyake, K., Kiyuna, T., Miyake, M., Kawaguchi, K., Yoon, S.N., Zhang, Z., Igarashi, K., Razmjooei, S., Wangsiricharoen, S., Murakami, T., Li, Y., Nelson, S.D., Russell, T.A., Singh, A.S., Hiroshima, Y., Momiyama, M., Matsuyama, R., Chishima, T., Singh, S.R., Endo, I., Eilber, F.C., Hoffman, R.M. Patient-derived orthotopic xenograft models of cancer of unknown primary precisely distinguish chemotherapy while tumor-targeting *S. typhimurium* A1-R is superior to first-line chemotherapy. *Signal Transduction and Targeted Therapy* **3**, 12, 2018.
80. Kawaguchi, K., Igarashi, K., Kiyuna, T., Miyake, K., Miyake, M., Murakami, T., Chmielowski, B., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Unno, M., Eilber, F.C., Hoffman, R.M. Individualized doxorubicin sensitivity testing of undifferentiated soft tissue sarcoma (USTS) in a patient-derived orthotopic xenograft (PDOX) model demonstrates large differences between patients. *Cell Cycle* **17**, 627-633, 2018.
81. Igarashi, K., Kawaguchi, K., Li, S., Han, Q., Tan, Y., Gainor, E., Kiyuna, T., Miyake, K., Miyake, M., Singh, A.S., Eckhardt, M.A., Nelson, S.D., Russell, T.A., Dry, S.M., Li, Y., Higuchi, T., Oshiro, H., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Recombinant methioninase combined with doxorubicin (DOX) regresses a DOX-

- resistant synovial sarcoma in a patient-derived orthotopic xenograft (PDOX) mouse model. *Oncotarget* **9**, 19263-19272, 2018.
82. Miyake, K., Kawaguchi, K., Kiyuna, T., Miyake, M., Igarashi, K., Zhang, Z., Murakami, T., Li, Y., Nelson, S.D., Elliott, I., Russell, T., Singh, A., Hiroshima, Y., Momiyama, M., Matsuyama, R., Chisima, T., Endo, I., Eilber, F.C., Hoffman, R.M. Regorafenib regresses an imatinib-resistant recurrent gastrointestinal stromal tumor (GIST) with a mutation in exons 11 and 17 in a patient-derived orthotopic xenograft (PDOX) nude mouse model. *Cell Cycle* **17**, 722-727, 2018.
83. Igarashi, K., Kawaguchi, K., Kiyuna, T., Miyake, K., Miyake, M., Li, S., Han, Q., Tan, Y., Zhao, M., Li, Y., Nelson, S.D., Dry, S.M., Singh, A.S., Elliott, I., Russell, T.A., Eckardt, M.A., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Tumor-targeting *Salmonella typhimurium* A1-R combined with recombinant methioninase and cisplatin eradicates an osteosarcoma cisplatin-resistant lung metastasis in a patient-derived orthotopic xenograft (PDOX) mouse model: Decoy, trap and kill chemotherapy moves toward the clinic. *Cell Cycle* **17**, 801-809, 2018
84. Kawaguchi, K., Igarashi, K., Miyake, K., Lwin, T.M., Miyake, M., Kiyuna, T., Hwang, H.K., Murakami, T., Delong, J.C., Singh, R.S., Clary, B., Bouvet, M., Unno, M., Hoffman, R.M. MEK inhibitor trametinib in combination with gemcitabine regresses a patient-derived orthotopic xenograft (PDOX) pancreatic cancer nude mouse model. *Tissue and Cell* **52**, 124-128, 2018.
85. Russell, T.A., Eckardt, M., Murakami, T., Elliott, I., Kawaguchi, K., Kiyuna, T., Igarashi, K., Li, Y., Crompton, J., Graham, D.S., Dry, S.M., Bernthal, N., Yanagawa, J., Kalbasi, A., Federman, M., Chmielowski, B., Singh, A., Hoffman, R.M., Eilber, F.C. Clinical factors impacting the establishment of soft tissue sarcoma patient-derived orthotopic xenograft (PDOX): A UCLA sarcoma program prospective clinical trial. *JCO Precision Oncology*, in press. DOI: 10.1200/PO.17.00071
86. Igarashi, K., Kawaguchi, K., Kiyuna, T., Miyake, K., Miyake, M., Li, Y., Nelson, S.D., Dry, S.M., Singh, A.S., Elliott, I., Russell, T.A., Eckardt, M.A., Yamamoto, N., Hayashi, K., Kimura, H., Miwa, S., Tsuchiya, H., Eilber, F.C., Hoffman, R.M. Temozolomide regresses a doxorubicin-resistant undifferentiated spindle-cell sarcoma patient-derived orthotopic xenograft (PDOX) precision-oncology nude-mouse model matching the patient with effective therapy. *J. Cell. Biochem* **119**, 6598-6603. 2018.
87. Kawaguchi, K., Miyake, K., Han, Q., Li, S., Tan, Y., Igarashi, K., Lwin, T.M., Higuchi, T., Kiyuna, T., Miyake, M., Oshiro, H., Bouvet, M., Unno, M., Hoffman, R.M. Targeting altered cancer methionine metabolism with recombinant methioninase (rMETase) overcomes partial gemcitabine-resistance and regresses a patient-derived orthotopic xenograft (PDOX) nude mouse model of pancreatic cancer. *Cell Cycle* **17**, 868-873. 2018.
88. Kawaguchi K, Miyake K, Han Q, Li S, Tan Y, Igarashi K, Kiyuna T, Miyake M, Higuchi T, Oshiro H, Zhang Z, Razmjooei S, Wangsiricharoen S, Bouvet M, Singh SR, Unno M, Hoffman RM. Oral recombinant methioninase (o-rMETase) is superior to injectable rMETase and overcomes acquired gemcitabine resistance in pancreatic cancer. *Cancer Lett*, **432**, 251-259. 2018.
89. Kiyuna T, Tome Y, Murakami T, Zhao M, Miyake K, Igarashi K, Kawaguchi K, Miyake M, Oshiro H, Higuchi T, Li Y, Dry SM, Nelson SD, Russell TA, Eckardt MA, Singh AS, Kanaya F, Eilber FC, Hoffman RM. Tumor-targeting *Salmonella typhimurium* A1-R arrests a doxorubicin-resistant PDGFRA-amplified patient-derived orthotopic xenograft mouse model of pleomorphic liposarcoma. *J Cell Biochem.*, in press. doi: 10.1002/jcb.27183. 2018
90. Kawaguchi K, Miyake K, Zhao M, Kiyuna T, Igarashi K, Miyake M, Higuchi T, Oshiro H, Bouvet M, Unno M, Hoffman RM. Tumor targeting *Salmonella typhimurium* A1-R in combination with gemcitabine (GEM) regresses partially GEM-resistant pancreatic cancer patient-derived orthotopic xenograft (PDOX) nude mouse models. *Cell Cycle*. in press, doi: 10.1080/15384101.2018.1480223. 2018.
91. Miyake K, Kawaguchi K, Miyake M, Zhao M, Kiyuna T, Igarashi K, Zhang Z, Murakami T, Li Y, Nelson SD, Bouvet M, Elliott I, Russell TA, Singh AS, Hiroshima Y, Momiyama M, Matsuyama R, Chishima T, Singh SR, Endo I, Eilber FC, Hoffman RM. Tumor-targeting *Salmonella typhimurium* A1-R suppressed an imatinib-resistant gastrointestinal stromal tumor with c-kit exon 11 and 17 mutations. *Heliyon* **4**, e00643. 2018.
92. Kawaguchi K, Igarashi K, Miyake K, Kiyuna T, Miyake M, Singh AS, Chmielowski B, Nelson SD, Russell TA, Dry SM, Li Y, Unno M, Singh SR, Eilber FC, Hoffman RM. Patterns of Sensitivity to a Panel of Drugs are highly Individualized for Undifferentiated/Unclassified Soft Tissue Sarcoma (USTS) in Patient-Derived Orthotopic Xenograft (PDOX) Nude-Mouse Models. *J Drug Target* **19**, 1-25. 2018.
93. Kiyuna T, Murakami T, Tome Y, Igarashi K, Kawaguchi K, Miyake K, Miyake M, Li Y, Nelson SD, Dry SM, Singh AS, Russell TA, Singh SR, Kanaya F, Eilber FC, Hoffman RM. Doxorubicin-resistant pleomorphic liposarcoma with PDGFRA gene amplification is targeted and regressed by pazopanib in a patient-derived orthotopic xenograft mouse model. *Tissue and Cell* **53**, 30-36. 2018.