

CURRICULUM VITAE

Shi-He Liu, Ph.D.

EDUCATION

2003-2007

Post-Doctoral

Department of Surgery, Baylor College of Medicine

1993-1996

M. S.

Peking Union Medical College (PUMC) in Chinese Academy of Medical Sciences (CAMS). P. R. China

Cell Immune Function in Chronic Myeloid Leukemia

1989-1993

Residency

Department of Hematology, Institute of Hematology, Chinese Academy of Medical Sciences, Tianjin, P. R. China

1984-1989

M.D.

Medicine, Shandong Medical College, P. R. China

OTHER ADVANCED TRAINING

1994-1994

Clinical Rotation

Department of Medicine, General Hospital, Tianjin Medical College, Tianjin, P. R. China

1997-1998

Cytogenetics & Molecular Genetics

Department of Cytogenetic, Suzhou Medical College, Suzhou, Nanjin, P. R. China

ACADEMIC APPOINTMENT

2016-present

Assistant Professor

Department of Surgery, University of Toledo, College of Medicine & Life Sciences, Toledo, OH

2013-2016

Assistant Professor

Department of Surgery, David Geffen School of Medicine at UCLA University of California, Los Angeles, CA

2012-2013

Senior Research Scientist

Department of Cancer Biology, MD Anderson Cancer Center, Houston, TX

2012-2012

Visiting Researcher

Department of Surgery, David Geffen School of Medicine at UCLA University of California, Los Angeles

2008-2012

Assistant Professor

Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, TX

2007-2008

Instructor

Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, TX

2002-2003

Associate Professor

Department of Hematology, Institute of Hematology, Chinese Academy of Medical Sciences, Tianjin, P. R. China

1997-2002

Doctor-in-Charge

Department of Hematology, Institute of Hematology, Chinese Academy of Medical Sciences, Tianjin, P. R. China

HONORS OR AWARDS

- 2015** **Hirshberg Foundation for Pancreatic Cancer Research award.** David Geffen School of Medicine at UCLA University of California, Los Angeles
- 2008** **Molecular Surgeon Young Investigator Award-** Baylor College of Medicine. Michael E. DeBakey Department of Surgery, Houston, Texas
- 2007** **Molecular Surgeon Young Investigator Award-** Baylor College of Medicine. Michael E. DeBakey Department of Surgery, Houston, Texas
- 2006** **Molecular Surgeon Young Investigator Award-** Baylor College of Medicine. Michael E. DeBakey Department of Surgery, Houston, Texas
- 2006** **Best Paper Award-** First Annual Academic Surgical Congress,
- 2004** **Molecular Surgeon Young Investigator Award-** Baylor College of Medicine. Michael E. DeBakey Department of Surgery, Houston, Texas
- 2002** **Excellent Thesis Award-** Annual Meeting of CAMS & PUMC, Beijing, P. R. China
- 2005** **Tianjin Natural Scientific Award-**Tianjin Government, Tianjin, P. R. China

PUBLICATIONS:

1. Yu J. H., Liu S. H., Hong Y. W., Markowiak S., Sanchez R., Schroeder J., Heidt D., Brunicardi F. C. Cancer microarray data weighted gene co-expression network analysis identifies a gene module and hub genes shared across nine types of solid cancer. CellR4 2017; 5 (5): e2439
2. Yu J, **Liu SH**, Sanchez R, Nemunaitis J, Rozengurt E, Brunicardi FC. PDX1 associated therapy in translational medicine. Ann Transl Med. 2016 Jun;4(11):214. PMID: 27386488
3. Yu J, **Liu SH**, Sanchez R, Nemunaitis J, Rozengurt E, Brunicardi FC. Pancreatic cancer actionable genes in precision medicine and personalized surgery. Surgeon. 2016 Jun 28. PMID: 27374183
4. Zhou G, Yu J, Wang A, **Liu SH**, Sinnott-Smith J, Wu J, Sanchez R, Nemunaitis J, Ricordi C, Rozengurt E, Brunicardi FC. Metformin Restrains Pancreatic Duodenal Homeobox-1 (PDX-1) Function by Inhibiting ERK Signaling in Pancreatic Ductal Adenocarcinoma. Curr Mol Med. 2016; 16(1):83-90. PMID: 26695692
5. Wu JX, **Liu SH**, Nemunaitis JJ, Brunicardi FC. Liposomal insulin promoter-thymidine kinase gene therapy followed by ganciclovir effectively ablates human pancreatic cancer in mice. Cancer Lett 2015; 359(2):206-10. PMID: 25596375
6. Zhou G, Sinnott-Smith J, **Liu SH**, Yu J, Wu J, Sanchez R, Pandol SJ, Abrol R, Nemunaitis J, Rozengurt E, Brunicardi FC. Down-regulation of pancreatic and duodenal homeobox-1 by somatostatin receptor subtype 5: a novel mechanism for inhibition of cellular proliferation and insulin secretion by somatostatin. Front Physiol. 2014 Jun 25;5: 226. PMID: 25009500

7. Wu J, **Liu SH**, Yu J, Zhou G, Rao D, Jay CM, Kumar P, Sanchez R, Templeton N, Senzer N, Maples P, Nemunaitis J, Brunicardi FC. (2014) Vertically Integrated Translational Studies of PDX1 as a Therapeutic Target for Pancreatic Cancer via a Novel Bifunctional RNAi platform. *Cancer Gene Therapy* 2014. PMID: 24457987
8. Roland S, Arumugam T, Deng D, **Liu SH**, Philip B, Gomez S, Ramachandran V, Wang H, Cruz-Monserrate Z and Logsdon CD. The lactate receptor GPR81 is critical for tumor cell survival. *Cancer Res.* 2014 Sep 15; 74(18):5301-10. PMID: 24928781
9. **Liu SH**, Zhou GS, Yu JH, Wu J, Nemunaitis JJ, Senzer N, Dawson D, Li M, Fisher W, Brunicardi FC (2013) Notch1 Activation Up-Regulates Pancreatic and Duodenal Homeobox-1. *Genes (Basel)* 4(3): 358–374 PMCID: PMC 3924823
10. Jay CM, Ruoff C, Kumar P, Maass H, Spanhel B, Miller M, Arrington A, Montalvo N, Gresham V, Rao DD, Evans C, Wang Z, Brunicardi FC, **Liu SH**, Zhou G, Senzer N, Nemunaitis J, King L, Weeks B, Clubb FJ, Fossum TW, Maples PB. Assessment of intravenous pbi-shRNA PDX1 nanoparticle (OFHIRNA-PDX1) in yucatan swine. *Cancer Gene Ther.* 2013 Dec;20(12):683-9. PMID: 24287722
11. Zhou G, Wang H, **Liu SH**, Shahi KM, Lin X, Wu J, Feng XH, Qin J, Tan TH, Brunicardi FC. p38 MAP Kinase Interacts with and Stabilizes Pancreatic and Duodenal Homeobox-1. *Curr Mol Med.* 2013;13(3):377-86
12. **Liu SH**, Rao D, Nemunaitis J, Senzer N, Dawson D, Gingras MG, Wang Z, Gibbs R, Norman M, Templeton NS, DeMayo J, Stehling K, Fisher W, and Brunicardi FC. PDX-1 is a therapeutic target for pancreatic cancer, insulinoma and islet neoplasia using a novel RNA interference platform. *PLoS One.* 2012;7(8):e40452
13. Zhou G, **Liu SH**, Shahi KM, Wang H, Duan X, Lin X, Feng XH, Li M, Fisher WE, Demayo FJ, Dawson D, Brunicardi FC. Negative regulation of pancreatic and duodenal homeobox-1 by somatostatin receptor subtype 5. *Mol Endocrinol.* 2012 Jul;26(7):1225-34
14. Wang Y, Zhang Y, Yang J, Ni X, **Liu S**, Li Z, Hodges SG, Fisher WE, Brunicardi FC, Gibbs RA, Gingras MC, Li M. Genomic Sequencing of Key Genes in Mouse Pancreatic Cancer Cells. *Curr Mol Med.* 2012 Jan 2.
15. Rajput P, Kharmate G, Norman M, **Liu SH**, Sastry B, Brunicardi FC, Kumar U. Somatostatin Receptor 1 and 5 Double knockout mice Mimics Neurochemical changes of Huntington's disease transgenic mice. *PLoS One.* 2011;6(9):e24467
16. Phadke AP, Jay CM, Wang Z, Chen S, **Liu S**, Haddock C, Kumar P, Pappen BO, Rao DD, Templeton NS, Daniels EQ, Webb C, Monsma D, Scott S, Dylewski D, Frieboes HB, Brunicardi FC, Senzer N, Maples PB, Nemunaitis J, Tong AW. In vivo Safety and Antitumor Efficacy of Bifunctional Small Hairpin RNAs Specific for the Human Stathmin 1 Oncoprotein. *DNA Cell Biol.* 2011 Sep;30(9):715-26
17. Nemunaitis J, Rao DD, **Liu SH**, Brunicardi FC Personalized Cancer Approach: Using RNA Interference Technology. 2011 Aug;35(8):1700-14.
18. Sarkar A, Zhang M, **Liu SH**, Sarkar S, Brunicardi FC, Berger DH, Belaguli NS. Serum response factor expression is enriched in pancreatic {beta} cells and regulates insulin gene expression. *FASEB J.* 2011 Aug;25(8):2592-603
19. **Liu SH**, Smyth-Templeton N, Davis AR, Davis EA, Ballian N, Li M, Liu H, Fisher W, Brunicardi FC. Multiple treatment cycles of liposome-encapsulated adenoviral RIP-TK gene therapy effectively ablate human pancreatic cancer cells in SCID mice. *Surgery.* 2011, 149(4):484-95

20. Balentine CJ, Berger DH, **Liu SH**, Chen C, Nemunaitis J, Brunicardi FC. Defining the Cancer Master Switch. *World J Surg.* 2011 Aug; 35(8):1738-45
21. Zhou G, Gingras MC, **Liu SH**, Li D, Li Z, Catania RL, Stehling KM, Li M, Paganelli G, Gibbs RA, Demayo FJ, Fisher WE, Brunicardi FC. The Hypofunctional Effect of P335L Single Nucleotide Polymorphism on SSTR5 Function. *World J Surg.* 2011 Aug;35(8):1715-24
22. **Liu SH**, Patel S, Gingras MC, Nemunaitis J, Zhou G, Chen C, Li M, Fisher W, Gibbs R, Brunicardi FC. PDX-1: demonstration of oncogenic properties in pancreatic cancer. *Cancer.* 2011, 117(4):723-33.
23. Patel SG, Zhou G, **Liu SH**, Li M, Jeong JW, DeMayo FJ, Gingras MC, Gibbs RA, Fisher WE, Brunicardi FC. Microarray analysis of somatostatin receptor 5-regulated gene expression profiles in murine pancreas. *W. J Surg.* 2009, 33(4):630-7.
24. Ballian N, **Liu SH**, Brunicardi FC. Transcription factor PDX-1 in human colorectal adenocarcinoma: a potential tumor marker? *World J Gastroenterol.* 2008, 14(38):5823-6.
25. **Liu SH**, Ballian N, Belaguli NS, Patel S, Li M, Templeton NS, Gingras MC, Gibbs R, Fisher W, Brunicardi FC. PDX-1 acts as a potential molecular target for treatment of human pancreatic cancer. *Pancreas.* 2008, 37(2):210-20.
26. **Liu SH**, Davis A, Li Z, Ballian N, Davis E, Wang XP, Fisher W, Brunicardi FC. Effective ablation of pancreatic cancer cells in SCID mice using systemic adenoviral RIP-TK/GCV gene therapy. *J Surg Res.* 2007, 141(1): 45-52.
27. Feanny MA, Fagan SP, Ballian N, **Liu SH**, Li Z, Wang X, Fisher W, Brunicardi FC, Belaguli NS. PDX-1 Expression Is Associated with Islet Proliferation In Vitro and In Vivo. *J Surg Res.* 2007 Jun 19,
28. Ballian N, Hu M, **Liu SH**, Brunicardi FC. Proliferation, hyperplasia, neogenesis, and neoplasia in the islets of Langerhans. *Pancreas.* 2007 Oct;35(3):199-206.
29. Liu S, Wang X, Brunicardi, F. Enhanced cytotoxicity of RIP-TK gene therapy via PDX-1 co-delivery. *J Surg Res.* 2007, 137(1):1-9.
30. Levy S, Zhou B, Ballian N, Li Z, **Liu SH**, Feanny M, Wang XP, Blanchard DK, Brunicardi FC. Cytotoxic gene therapy for human breast cancer in vitro. *J Surg Res.* 2006, 136(1):154-160. (BCM)
31. Wang X, Olmsted-Davis E, Davis A, Liu S, Li Z, Yang J, Brunicardi FC. Specific targeting of pancreatic islet cells in vivo by insulin-promoter-driven adenoviral conjugated reporter genes. *World J Surg.* 2006, 30(8):1543-1552. (BCM)
32. Li CW, Bo LJ, Dai Y, Liu XP, Qin S, **Liu SH**, Wang JX. Application of dual-color fluorescence in situ hybridization in acute myeloid leukemia with t (8; 21). *Chin J Hematol,* 2006, 27(1):32-35. (Institute of Hematology (IH), CAMS)
33. Wang XP, Norman M, Yang J, **Liu SH**, Magnusson J, Demayo FJ, Brunicardi FC. The Effect of Global SSTR5 Gene Ablation on the Endocrine Pancreas and Glucose Regulation in Aging Mice. *J Surg Res.* 2005, 129(1):64-72. (BCM)
34. Wang XP, Yazawa K, Templeton NS, Yang J, Liu S, Li ZJ, Li M, Yao Q, Chen C, Brunicardi FC. Intravenous delivery of liposome-mediated nonviral DNA is less toxic than intraperitoneal delivery in mice. *World J Surg,* 2005, 29(3):339-43. (BCM)
35. Xiao Z, Liu S, Liu X, Yu M, Hao Y. Tetraploidy or near-tetraploidy clones with double 8;21 translocation: a non-random additional anomaly of acute myeloid leukemia with t(8;21)(q22;q22). *Haematologica.* 2005,90(3):413-414. (IH, CAMS)

36. Mi YC, Xue YP, Yu WJ, **Liu SH**, Zhao YZ, Meng QX, Bian SG, Wang JX. Effectiveness analysis of HA based triple-drug regimen as induction chemotherapy in the treatment of acute myeloid leukemia and its relationship with karyotype. *Chin J Hemotol*, 2005 , 26(12):705-709. (IH, CAMS)
37. Shao YQ, **Liu SH**, Xu SC, Xu ZF, Li Rui, Qiu LG, Hao YS, Xiao ZJ. WHO classification of 261 patients with acute myeloid leukemia, *J Leukemia Lymphoma*, 2005, 14(3): 14(3):129-132. (IH, CAMS)
38. Zhang Y, Zhang L, **Liu SH**, Zhou XH, Hao YS, Xiao ZJ. Analysis of 12p abnormalities of chromosome in 12 cases of myeloid malignancies. *Chin J Med Genet*, 2005, 22(2): 229-230. (IH, CAMS)
39. Li CW, Bo LJ, Qin S, Liu XP, Dai Y, **Liu SH**. The utilities of sequential R-banding and fluorescence in situ hybridization for the diagnosis of leukemia, *Chin J Lab Med*, 2005, 28(3): 251-253. (IH, CAMS)
40. Sun XM, **Liu SH**, Bian SG, Mi YC, Wang JX. Clinical and Cytogenetic analysis of hematological malignancies with 3q21 abnormalities, *Tianjin Med J*, 2004, 32(11): 692-694 (IH, CAMS)
41. **Liu S**, Li C, Bo L, Dai Y, Xiao Z, Wang J. AML1/RUNX1 fusion gene and t(5;21)(q13;q22) in a case of chronic myelomonocytic leukemia with progressive thrombocytopenia and monocytosis. *Cancer Genet Cytogenet*. 2004,152(2):172-174. (IH, CAMS)
42. **Liu S**, Bo L, Liu X, Li C, Qin S, Wang J. IGH gene involvement in two cases of acute lymphoblastic leukemia with t(14;14)(q11;q32) identified by sequential R-banding and fluorescence in situ hybridization. *Cancer Genet Cytogenet*. 2004, 152(2):141-145. (IH, CAMS)
43. Li CW, **Liu SH**, Bo LJ, Qin S, Liu XP, Dai Y, Wang JX. The application of fluorescence in situ hybridization for diagnosis of acute promyelocytic leukemia. *Chin J Hematol*. 2004 Jun;25(6):346-350. (IH, CAMS)
44. Yu MH, **Liu SH**, Shao YQ, Hao YS, Xiao ZJ. Karyotypic and IPSS grouping of primary myelodysplastic syndromes patients: a comparison between FAB-and WHO-classification. *Chin J Hematol*. 2004, 25 (8) 482-485. (IH, CAMS)
45. **Liu SH**, Mi YC, Liu XP, et al. Analysis of the factors associated with prognosis in patients with Ph chromosome positive adult acute lymphoblastic leukemia. *Chin J Hematol*, 2004, 25: 417-420. (IH, CAMS)
46. Dai Y, **Liu SH**, Li CW, et al. Chronic myelomonocytic leukemia with t(5;21)(q13;q22): a case report and literature review. *Chin J Hematol*, 2004, 25:289. (IH, CAMS)
47. Qin S, **Liu SH**, Bo LJ, et al. Clinical and cytogenetic features of 29 cases of myelodysplastic syndrome associated with del(20q). *Chin J med genet*, 2004,21:171-172. (IH, CAMS)
48. Lin D, **Liu SH**, Zhu XF, et al. Study of childhood acute lymphoblastic leukemia with t(12;21). *Chin J Hematol*, 2004,25:17-21. (IH, CAMS)
49. Bo LJ, **Liu SH**, Liu XP, et al. The molecular cytogenetic study of acute myeloid leukemia with inv(16). *Chin J Hematology*, 2004, 25: 367-369. (IH, CAMS)
50. Liu XP, **Liu SH**, Li CW, et al. Analysis and identification of variant Ph chromosome translocation in patients with chronic myelogenous leukemia by conventional cytogenetics and fluorescence in situ hybridization. *Journal of Experimental Hematology* 2004,12(3):298-303. (IH, CAMS)

51. Feng M, Xu ZF, Shao YQ, **Liu SH**, Wang YS, Geng Jy, Hao YS, Xiao ZJ. Studying of the association of cellular drug resistance in vitro with p170 expression and specific cytogenetic aberrations in patients with acute myeloid leukemia. *J Leukemia & Lymphoma*, 2004, 13(6): 323-325. (IH, CAMS)
52. Xiao ZJ, **Liu SH**, Yu MH, Xu ZF, Hao YH. Isochromosome 17q in patients with myelodysplastic syndromes: six new cases. *Hematologica*, 2003, 88(6): 714-715. (IH, CAMS)
53. Xiao Y, **Liu SH**, Liu XP, Qin S, Bo LJ, Li CW, Dai Y, Wang JS. Molecular cytogenetic analysis of -7/7q- abnormalities in patients with myeloid malignancies. *Chin J Med Genet*, 2003, 20(6):471-476. (IH, CAMS)
54. Zhang FK, Zheng YL, Liu JH, Chen HS, **Liu SH**, Xu MQ, Nie N, Hao YS. Clinical and laboratory study of a case of hematidrosis. *Chin J Hematol*, 2004, 25(3):147-150. (IH, CAMS)
55. Yang CL, Xu ZL, **Liu SH**, Jiang WX. Shwachman-Diamond syndrome: 1 case report and literature review. *J Leukemia and Lymphoma*, 2003,12:377-380. (IH, CAMS)
56. **Liu SH**, Liu XP, Zhu XF, et al. A comparative analysis of clinical and prognostic features between patients with Ph chromosome positive adult and childhood acute lymphoblastic leukemia. *J leukemia & Lymphoma*, 2003,12:326-329. (IH, CAMS)
57. Zhang XW, Ji LX, **Liu SH**, Wang JX. Ph-negative acute lymphocytic leukemia occurring after interferon therapy for Ph-positive chronic myeloid leukemia. *Leuk Res*, 2003, 27: 367-369. (IH, CAMS)
58. Zhang FK, **Liu SH**, Xu ZF, Li CW, Nie N, Shi JX, Bian SG, Wang JX. A case of patient with chronic myeloid leukemia in crisis of acute hybrid leukemia. *Chin J Hematol*, 2003,24(12):665. (IH, CAMS)
59. Yan KH, You SG, Bian SG, Ma GJ, Ge W, Ma S, **Liu SH**, Zhao CH. Dendritic cells (DC) induced from acute myeloid leukemia (AML) cells with cytokine cocktails *Chin J Hematol*, 2003, 24(7):365-368. (IH, CAMS)
60. Li Q, **Liu SH**, Qian LS, et al. Interphase fluorescence in situ hybridization (FISH) for assessing response to therapy in chronic myeloid leukemia patients after IFN treatment. *Chinese Journal of Practical Internal Medicine*, 2002, 22(3): 150-152. (IH, CAMS)
61. Zhang ZB, **Liu SH**, Li J, et al. Comparison of detection of trisomy 8 with fluorescence in situ hybridization and conventional karyotype analysis in myelodysplastic syndrome. *Chin J Exp Hematol*, 2002, 10(2):115-118. (IH, CAMS) **Liu SH**, Qin S, Wang JX, et al. Clinical and cytogenetic analysis of patients with lymphoid malignancies carrying 14q32 abnormality. *Chin J Hematol*, 2001 Nov; 22(11): 569-572. (IH, CAMS)
62. **Liu SH**, Li Q, Pang W, et al. A new complex variant t(4;15;17) in acute promyelocytic leukemia: fluorescence in situ hybridization confirmation and literature review. *Cancer Genet Cytogenet*. 2001 Oct 1;130(1):33-37. (IH, CAMS)
63. **Liu SH**, Li Q, Han MZ, et al. Dynamic monitoring of Ph positive cells during early post-transplant period in chronic granulocytic leukemia by interphase FISH. *Chin J Hematol*, 2001 Feb; 22(2):68-71. (IH, CAMS)
64. **Liu SH**, Bo LJ, Liu XP, et al. Biological characteristics and prognostic significance of trisomy 21 in patients with myeloid malignant disease. *Chin J Med Genet*, 2001, 18 (4): 322-323. (IH, CAMS)

65. Han JL, Han MZ, **Liu SH**, et al. Establishment and biological characteristics of a novel erythroleukemia cell line (HIE1). *Chin J Hematol*, 2000,21(1): 6-9. (IH, CAMS)
66. Mi YC, Bian SG, **Liu SH**, et al. Change of chromosomal karyotype in acute myelogenous leukemia during whole course of disease. *Chin J Hematol*, 2000,21(7):387-388. (IH, CAMS)
67. Chen Y, Hao Y, You S, Wei D, Wei D, Liao X, Ding S, Liu S, Wei D. The study on T lymphocytes recognition of tumor antigens on autologous CML cells. *Chin J Hematology*, 1997,18(12):638. (IH, CAMS)

POSTER PRESENTATIONS AND ABSTRACTS:

1. **Shi-He Liu**, Guisheng. Zhou, Kelly Shahi, John Nemunaitis, Willam Fisher and F. Charles Brunicardi. A Novel PDX-1-Specific, Synthetic Promoter Driving Systemic Suicide Gene Therapy Suppresses Pancreas Cancer (PC) Tumor Volume In Mice. 8th Annual Academic Surgical Congress, February 5-7, 2013, New Orleans, Louisiana, USA (National)
2. James Wu, **Shi-He Liu**, Juehua Yu, Guisheng Zhou, Marie-Claude Gingras, Richard Gibbs, William Fisher and F. Charles Brunicardi. PDX-1 And PDX-1 With Proline 45 Deletion Mediate Oncogenesis Through The Insulin Signaling Pathway, Axon Guidance Genes, And P53 Signaling Pathway. 8th Annual Academic Surgical Congress, February 5-7, 2013, New Orleans, Louisiana, USA (National)
3. Shi-He Liu, Marie-Claude Gingras, Guisheng Zhou, Richard Gibbs, John Nemunaitis, William Fisher and F. Charles Brunicardi. Deletion of Proline 45 (PDX-1 Δ P45) Enhances Oncogenic Properties of PDX-1. CURE: DIGESTIVE DISEASES RESEARCH CENTER 2012 ANNUAL RESEARCH MEETING. 2012
4. **Shi-He Liu**, Guisheng Zhou, Kelly M Stehling, John Nemunaitis, David Dawson, William Fisher and F. Charles Brunicardi. Notch1 upregulates PDX-1 and acts synergistically in the development of islet cell neoplasia. 7th Annual Academic Surgical Congress, February 14-16, 2012, Los Vegas, NV, USA (National)
5. Zhou G, **Shi-He Liu**, Kelly M. Shahi and F. Charles Brunicardi,. Protein Phosphatase 4 Interacts with and Down-regulates Pancreatic and Duodenal Homeobox-1. Ubiquitin Drug Discovery and Diagnostics 2011, Philadelphia, PA, July 11-13, 2011
6. Guisheng Zhou, **Shi-He Liu**, Xia Lin, Xinhua Feng, William. E. Fisher, F. Charles Brunicardi. Phosphorylation-Dependent Stabilization of Pancreatic and Duodenal Homeobox-1 (PDX-1). 6th Annual Academic Surgical Congress, February 1 - 3, 2011. Huntington Beach, CA, USA (National)
7. **Shi-He Liu**, Zhaohui Wang, Kelly M. Stehling, Donald Rao, Guisheng Zhou, Phillip B. Maples, John Nemunaitis, William Fisher and F. Charles Brunicardi. BIV-bi-shRNAiPDX-1 Targeting PDX-1 Therapy Prevents Hypoglycemic Death from Metastatic Insulinoma in Mice. 6th Annual Academic Surgical Congress, February 1 - 3, 2011. Huntington Beach, CA, USA (National).
8. **Shi-He Liu**, Sanjeet Patel, Guisheng Zhou, Marie-Claude Gingras, Richard Gibbs, Robbi Catania, William Fisher and F. Charles Brunicardi. PDX-1 Δ P47 is potential oncogene promote cell transformation and tumorigenesis in human cell lines. 41th Annual Meeting of American Pancreatic Association, Nov 3-6, 2010, Chicago, IL USA
9. **Shi-He Liu**, Sanjeet Patel, Guisheng Zhou, Marie-Claude Gingras, Richard Gibbs, Robbi Catania, William Fisher and F. Charles Brunicardi. Comparative analysis of PDX-1 and its

mutation form PDX-1 Δ P47 in regulating neoplasia and transformation. 5th Annual Academic Surgical Congress, February 3 - 5, 2010. San Antonio, Texas

10. Guisheng Zhou, **Shi-He Liu**, Xia Lin, Xin-Hua Feng, William E. Fisher, F. Charles Brunicaardi. SSTR5 Down-Regulates PDX-1 via Inhibition of P38 MAP Kinase. 5th Annual Academic Surgical Congress, February 3 - 5, 2010. San Antonio, Texas
11. **Shi-He Liu**, Min Li, Nik Ballian, Narasimhaswamy S. Belaguli, Nancy S. Templeton, Sanjeet Patel, William Fisher and F Charles Brunicaardi. PDX-1 acts as a Molecular Target for Therapy for Pancreatic Cancer. Annual Meeting of Michael E DeBakey Department of Surgery, Baylor College of Medicine, December 14, 2007. Houston, Texas.
12. **Shi-He Liu**, Min Li, Nik Ballian, Narasimhaswamy S. Belaguli, Nancy S. Templeton, Sanjeet Patel, William Fisher and F Charles Brunicaardi. PDX-1 acts as a Molecular Target for Therapy for Pancreatic Cancer. 3rd Academic Surgical Congress, February 12-15, 2008, Huntington Beach, CA, USA (National).
13. **Shi-He Liu**, Nancy Smyth-Templeton, Alan R. Davis, Elizabeth A. Davis, Nik Ballian, Zhijun Li, William Fisher, Hao Liu and F. Charles Brunicaardi. Multiple treatment cycles of liposome encapsulation of adenoviral RIPTK gene therapy effectively ablate human pancreatic cancer cells in SCID mice. 3rd Academic Surgical Congress, February 12-15, 2007, Huntington Beach, CA, USA (National).
14. **Shihe Liu**, Zhijin Li, Nikforos Bailian, Alan Davis, Xiao-ping Wang, F Charles Brunicaardi. Effective ablation of human pancreatic cancer cells in SCID mice using systemic adenoviral rat insulin promoter directed thymidine kinase (Ad-RIP-TK) gene therapy. 2nd Academic Surgical Congress, February 6-9, 2007, Phoenix, AZ, USA
15. **Shihe Liu**, Zhijin Li, Nikforos Bailian, Alan Davis, Xiao-ping Wang, F Charles Brunicaardi. Effective ablation of human pancreatic cancer cells in SCID mice using systemic adenoviral rat insulin promoter directed thymidine kinase (Ad-RIP-TK) gene therapy. Annual Meeting of Michael E DeBakey Department of Surgery, Baylor College of Medicine.
16. **Shihe Liu**, Zhijin Li, Nikforos Bailian, Alan Davis, Xiao-ping Wang, F Charles Brunicaardi. Effective ablation of human pancreatic cancer cells in SCID mice using systemic adenoviral RIP-TK gene therapy. CAGT conference/retreat, November 16 & 17th, 2006, Moody Gardens, Galveston, Texas.
17. **Shihe Liu**, Xiao-ping Wang, Zhijin Li, Nikforos Bailian, Alan Davis, F Charles Brunicaardi. Somatic Genetic Engineering of the Murine Endocrine Pancreas Results in Novel Model of Nonimmune, Pancreatogenic Diabetes. American College of Surgeons' 92nd Annual Clinical Congress Meeting, October 8-12, 2006, in Chicago, Illinois.
18. **Shihe Liu**, Xiao-ping Wang, Zhijin Li, Nikforos Bailian, Alan Davis, F Charles Brunicaardi. RIPTK systemic suicide gene therapy for pancreatic cancer causes diabetes in mice. Cell TX Congress, May 18-20, 2006, Milan, Italy (International)
19. **Shihe Liu**, Xiao-ping Wang, F Charles Brunicaardi. Enhanced cytotoxicity of RIPTK gene therapy via PDX-1 co-delivery. 1st Annual Academic Surgical Congress, February 7-11, 2006, San Diego, CA, USA (National)
20. Feanny MA, Fagan S, **Liu S**, Li Z, Ballian N, Brunicaardi F, Wang XP. "PDX-1 Expression Is Associated With Islet Cell Proliferation In Vitro and In Vivo." First Annual Academic Surgical Congress, San Diego, California, February 8, 2006

21. Wang X, Li Z, Jeong J, **Liu S**, Magnusson J, DeMayo FJ, Brunicardi, F. "SSTR5 Regulates Pancreas Gene Expression and Islet Cell proliferation: A Microarray Analysis." First Annual Academic Surgical Congress, San Diego, California, February 9, 2006.
22. Ballian N, **Liu S**, Wang XP, Brunicardi F. "Expression of Endocrine Hormones and Somatostatin Receptors in the Adult Human Duodenum, Pancreas and Spleen: A Case Report." 92nd Annual Clinical Congress of the American College of Surgeons, Chicago, Illinois, October 9, 2006.
23. **Shihe Liu**, Xiao-ping Wang, F Charles Brunicardi. Beta cell-specific systemic suicide genetherapy causes diabetes in mice. Annual Meeting of Michael E DeBakey Department of Surgery, Baylor College of Medicine, December 17, 2004. Houston, Texas.
24. Levy S, Li Z, **Liu S**, Folcini F, Wang XP, Brunicardi FC. "Rat Insulin Promoter Directed Gene Therapy Induces Cytotoxic Effect in Human Breast Cancer Cells In Vitro." 2004 Molecular Surgeon Research Day, Houston, Texas, December 17, 2004.

MENTERSHIP/STUDENT & POSTDOCTORAL FELLOW

- Surgical Resident: James Wu, 2013-2015;
Feanny Mark 2006-2007
- Medical Students: Sanjeet Patel, 2008-2009;
Nikforos Bailian, 2006-2007
- Doctoral Student: Qiaoyun Shi (Biochemistry), 2008-2010
- Postdoc: Defeng Deng, 2008-2009
- Research assistant I: Kelly M. Shahi, 2008-2011
- Pre-medical student: Briana M. Jarrett, 2011
- Summer Student: Yunqi Zhao, 2014

RESEARCH SUPPORT (ONGOING AND COMPLETED)

NIH - NCI - R01 - CA95731: Pancreatic Cancer Treatment Using Surgery and Gene Therapy (Co-PI)

2002 – 2008 \$1,339,450

NIH - 2R01 - DK046441 - 11: Intraislet Communication in Surgically-Altered Pancreas (Co-PI)

2003 – 2014 \$2,035,250

Vivian L. Smith Foundation: PDX-1 Based Therapy for Pancreatic Cancer (Co-PI)

2006 – 2013 \$1,100,000

MD Anderson Foundation: PDX-1 Based Therapy for Pancreatic Cancer (Co-PI)

2006 – 2010 \$500,000

NIH – NCI – R01 – CA095731: PDX-1 is a Therapeutic Target for Pancreatic Cancer (Co-PI))

2008 – 2014 \$1,390,000

Cancer Prevention & Research Institute of Texas (CPRT): Tumor Banking for Genomic Research and Clinical Translation (Co-PI)

2010 – 2013 \$7,500,000

The Hirshberg Foundation Award: Developing a Potent Synthetic Reporter System for Earlier Detection, Accurate Quantification and Precise Localization of Pancreatic Cancer (PI)
02/2015 \$40,000

Moss Foundation Award:
Actionable Genomics Platform for Pancreatic Cancer(Co-PI)
06/2015 – 12/2016 \$150,000

University of California Cancer Research Coordinating Committee
An actionable genomics platform for PDAC targeted therapy using FDA approved drugs (Co-PI)
07/15-06/16 \$55,000

Pending Review:

NCI 1 U01 CA12212007: Actionable Gene Platform for Early Detection of Pancreatic Intraepithelial Neoplasia and Pancreatic Adenocarcinoma 2016-2021 - \$3,400,000

PATENTS/INVENTIONS

June 16, 2016 Submitted by the UCLA Office of Intellectual Property
Application U.S. 14/396,967
UCLA Case 30435288
Title: "Synthetic Promoter for High Throughput Screening and Gene Modulation"

March 21, 2014 Submitted by the UCLA Office of Intellectual Property
Title: "High Definition, Color Images, Animations, and Videos for Diagnostic and Personal Imaging Applications
Serial Number: 61/968,529
File #UC-2014-144-1-LA

January 29, 2013 U.S. Patent No. 8,361,983; GRAD: 1006
Title: Novel Therapeutic RNA Interference Technology Targeted to the PDX-1 Oncogene in PDX-1 Expressing Neuroendocrine Tumors
Serial No. 12/913,515

January 15, 2013 Submitted by the UCLA Office of Intellectual Property
Application U.S. 61/748,713
UCLA Case 2012-547-2
Title: "Synthetic Promoter for Modulating Gene Expression"