

Name

- **Yuh-Pyng Sher, PhD (佘玉萍)**

**Title**

- Associate Professor

Contact

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Resume

- Degree:
 - Ph.D., Cancer research** (*Sep, 2001-June, 2006*)
Institute of Molecular Medicine, College of Medicine, National Taiwan University
Advisor: Dr. Pan-Chyr Yang, Dr. Konan Peck, and Dr. Chia-Li Yu
 - M.S., Microbiology and Immunology** (*Sep, 1994 - June, 1996*)
Department of Medical Technology, College of Medicine, National Taiwan University
Advisor: Dr. Mi-Hua Tao
 - B.S., Medical Technology** (*Sep, 1990 - June, 1994*)
Department of Medical Technology, College of Medicine, National Taiwan University
- Experiences:
 - 2015- Associate Professor**
Graduate Institute of Clinical Medical Science, China Medical University
 - 2009-2015 Assistant Professor**
Graduate Institute of Clinical Medical Science, China Medical University
 - 2007-2009 Postdoctoral fellow**
Center for Molecular Medicine, China Medical University Hospital, Taichung, Taiwan, R.O.C.
- Honors and awards:

- 2016 Award of Travel Grant of the 75th Annual Meeting of the Japanese Cancer Association
- 2016 Invited speaker in Cancer Biology and Drug Discovery Ph.D. Program Retreat
- 2011 The first place of poster competition in International Symposium on Translational Cancer Research in conjunction with the 15th Annual Meeting of the Taiwan Cooperative Oncology Group
- 2007 NHRI Postdoctoral Fellowship Award
- 2001 Award of Travel Grant of the Institute of Biomedical Sciences, Academia Sinica
- 1998 Award of Travel Grant of the Institute of Biomedical Sciences, Academia Sinica
- 1997 Excellent Thesis Prize in Medical College of National Taiwan University

Fields of Specialty

- Cancer biology
- Molecular biology

Research

- Lung cancer
- Metastasis
- Immunotherapy
- Research Activity

The research themes in my lab aim to decipher the molecular mechanism important for lung cancer brain metastasis and identify biomarkers for early detection. In addition, we assess the mechanism of metastasis in other tumor types which are important and poor treatment in Taiwan such as esophageal squamous cell carcinoma and pancreatic cancer. We have combined the biochemical approaches, clinical studies and an experimental mouse model to address it. Several research projects are actively investigated in my lab. Furthermore, we focus on translational medicine study to develop promising cancer treatments for clinical application.

Paper & Project

(* Correspondence author; §Co-first author)

1. Lin SI, Huang MH, Chang YW, Chen IH, Roffler S, Chen BM, **Sher YP** and Liu SJ. Chimeric peptide containing both B and T cells epitope of

- tumor-associated antigen L6 enhances anti-tumor effects in HLA-A2 transgenic mice. *Cancer Lett* 377(2):126-133, 2016.
2. Liu EY, Huang WY, Chang YC, Tsai MH, Eric Chuang, Kuok QY, Bai ST, Chao LY, Sher YP*, and Lai LC*. Aryl Hydrocarbon Receptor Activates *NDRG1* Transcription under Hypoxia in Breast Cancer Cells. *Scientific Reports* 6:20808. February 2016
 3. Sher YP§, Lin SI§, Chen IH, Liu HY, Lin CY, Chiang IP, Roffler S, Chen HW, Liu SJ*. A HLA-A2-restricted CTL epitope induces anti-tumor effects against human lung cancer in mouse xenograft model. *Oncotarget* 7:671. November 2015.
 4. Chiu KL, Kuo TT, Kuok QY, Lin YS, Hua CH, Lin CY, Su PY, Lai LC*, and Sher YP*. ADAM9 enhances CDCP1 protein expression by suppressing miR-218 for lung tumor metastasis. *Scientific Reports* 5:16426. November 2015.
 5. Liu CM, Chiu KL, Chen TS, Chang SM., Yang SY, Chen LH, Ni YL, Sher YP, Yu SL, Ma WL*. Potential therapeutic benefit of combining gefitinib and tamoxifen for treating advanced lung adenocarcinoma. *Biomed Res Int* 2015(642041):1-11, 2015.
 6. Lin CY, Chen HJ, Huang CC, Lai LC, Lu TP, Tseng GC, Kuo TT, Kuok QY, Hsu JL, Sung SY, Hung MC*, Sher YP*. ADAM9 promotes lung cancer metastases to brain by a plasminogen activator-based pathway. *Cancer Research* 74(18):5229-43. September 2014
 7. Luo EC, Chang YC, Sher YP, Huang WY, Chuang LL, Chiu YC, Tsai MH, Eric Chuang, and Lai LC*. MicroRNA-769-3p Down-regulates *NDRG1* and Enhances Apoptosis in MCF-7 Cells During Reoxygenation. *Scientific Reports* 4:5908. August 2014
 8. Chang CY, Shen CY, Kang CK, Sher YP, Sheu WHH, Chang CC, Lee TH. Taurine protects HK-2 cells from oxidized LDL-induced cytotoxicity via the ROS-mediated mitochondrial and p53-related apoptotic pathways. *Toxicology and Applied Pharmacology* 279:351-363. July 2014
 9. Huang ST, Lin CL, Chang YJ, Sher YP, Wu, MJ, Shu KH, Sung FC, Kao CH*. Pneumococcal Pneumonia Infection Is Associated With End-Stage Renal Disease in Adult Hospitalized Patients: A Nationwide Population-Based Cohort Study. *Kidney International* advance online publication 2 April 2014; doi:10.1038/ki.2014.79
 10. Sher YP, Wang LJ, Tsai MH, Kuo TT, Huang CC, Chuang EY, Lai LC*. ADAM9 Up-regulates N-Cadherin via miR-218 Suppression in Lung Adenocarcinoma Cells. *PLoS ONE* 9(4):e94065. April 2014

11. Su PY, Liu SJ, Chen YH, Wu SS, Chen YL, Ke JR, Peng CY, and Sher YP*. Increased IL-8 and IL-1 in the bile of acute cholecystitis patients. *BioMedicine* 3(4):181-185. December 2013
12. Liu YJ, Lin YF, Chen YF, Luo EC, Sher YP, Tsai MH, Chuang EY, and Lai LC*. MicroRNA-449a Enhances Radiosensitivity in CL1-0 Lung Adenocarcinoma Cells. *PLoS ONE* 8(4):e62383. April 2013
13. Sher YP, Chang CM, Juo CG, Chen CT, Hsu JL, Lin CY, Han Z, Shiah SG, and Hung MC*. Targeted endostatin-cytosine deaminase fusion gene therapy plus 5-fluorocytosine suppresses ovarian tumor growth. *Oncogene* 32:1082-90. May 2013
14. Chi CY, Chu CC, Liu JP, Lin CH, Ho MW, Lo WJ, Lin PC, Chen HJ, Chou CH, Feng JY, Fung CP, Sher YP, Li CY, Wang JH, and Ku CL*. Anti-interferon gamma autoantibodies in adults with disseminated nontuberculous mycobacterial infections are associated with HLA-DRB1*16:02 and DQB1*05:02 and the reactivation of latent varicella-zoster virus infection. *Blood* 121(8):1357-1366. February 2013
15. Lee DF, Su J, Ang YS, Carvajal-Vergara X, Mulero-Navarro S, Pereira C F, Gingold J, Wang H-L, Zhao R, Sevilla A, Darr H, Williamson AJK, Chang B, Niu X, Aguilo F, Flores ER, Sher YP, Hung MC, Whetton AD, Gelb BD, Moor KA, Snoeck HW, Ma'ayan A, Schaniel C*, and Lemischka IR*. Regulation of Embryonic and Induced Pluripotency by Aurora Kinase-p53 Signaling. *Cell Stem Cell* 11:179-194. August 2012
16. Tu SH, Huang HI, Lin SI, Liu HY, Sher YP, Chiang SK, Chong P, Roffler S, Tseng GC, Chen HW, Liu SJ*. A novel HLA-A2-restricted CTL epitope of tumor associated antigen L6 can inhibit tumor growth in vivo. *Journal of Immunotherapy*. 35:235. April 2012
17. Lai LC, Su YY, Chen KC, Tsai MH, Sher YP, Lu TP, Lee CY, Chuang EY*. Down-Regulation of NDRG1 Promotes Migration of Cancer Cells during Reoxygenation. *PLoS ONE* 6(8):e24375. August 2011
18. Li LY*, Chen H, Hsieh YH, Wang YN, Chu HJ, Chen YH, Chen HY, Chien PJ, Ma HT, Tsai HC, Lai CC, Sher YP, Lien HC, Tsai CH and Hung MC*. Nuclear ErbB-2 Enhances Translation and Cell Growth by Activating Transcription of Ribosomal RNA Genes. *Cancer Research* 71:4269-79. June 2011
19. Sher YP§, Liu SJ§, Chang CM, Lien SP, Chen CH, Han Z, Li LY, Chen JS, Wu CW and Hung MC*. Cancer-targeted BikDD gene therapy elicits protective antitumor immunity against lung cancer. *Molecular Cancer Therapeutics*. 10(4):637-47. April 2011

20. Li LY*, Dai HY, Yeh FL, Kan SF, Lang J, Hsu JL, Jeng LB, Chen YH, Sher YP, Lin WC and Hung MC*. Targeted hepatocellular carcinoma proapoptotic BikDD gene therapy. *Oncogene*. 30:1773-83, January 2011
21. Leng CH, Chen HW, Chang LS, Liu HH, Liu SY, Sher YP, Chang YW, Lien SP, Huang TY, Chen MY, Chou AH, Chong P, Liu SJ*. A recombinant lipoprotein containing an unsaturated fatty acid activates NF- κ B through the TLR2 signaling pathway and induces a differential gene profile from a synthetic lipopeptide. *Molecular Immunology*. 47:2015-21. July 2010
22. Sher YP, Tzeng TF, Kan SF, Hsu J, Han Z, Xie X, Lin WC, Li LY* and Hung MC*. Cancer Targeted Gene Therapy of BikDD Inhibits Orthotopic Lung Cancer Growth and Improves Long-term Survival. *Oncogene*. 28(37):3286-95, July 2009
23. Liu SJ, Tsai JP, Shen CR, Sher YP, Hsieh CL, Yeh YC, Chou AH, Chang SR, Hsiao KN, Yu FW, and Chen HW*. Induction of a distinct CD8 Tnc17 subset by transforming growth factor-beta and interleukin-6. *J Leukoc Biol*. 82:354-60, 2007
24. Sher YP, Chou CC, Chou RH, Wu HM, Chang WS, Chen CH, Yang PC, Wu CW, Yu CL, and Peck K*. Human kallikrein 8 protease confers a favorable clinical outcome in non-small cell lung cancer by suppressing tumor cell invasiveness. *Cancer Res*. 66:11763-70, 2006.
25. Sher YP, Shih JY, Yang PC, Roffler SR, Chu YW, Wu CW, Yu CL, and Peck K*. Prognosis of non-small cell lung cancer patients by detecting circulating cancer cells in the peripheral blood with multiple marker genes. *Clin Cancer Res*. 11: 173-79, 2005.
26. Huang W, Sher YP, Peck K, Fung YC*. Matching gene activity with physiological functions. *Proc Natl Acad Sci USA*. 99: 2603-8, 2002.
27. JJW Chen, Peck K, Hong TM, Yang SC, Sher YP, Shih JY, Wu R, Roffler SR, Wu CW, Yang PC*. Global analysis of gene expression in invasion by a lung cancer model. *Cancer Res*. 61:5223-30, 2001.
28. Yoneda K, Peck K, Chang MMJ, Chmiel K, Sher YP, Chen J, Yang PC, Chen Y and Wu R*. Development of high-density DNA microarray membrane for profiling smoke- and hydrogen peroxide-induced gene in a human bronchial epithelial cell line. *Am J Respiratory and Critical Care Medicine*. 164:S85-9, 2001.
29. Huang W, Sher YP, West DD, Wu JT, Peck K, Fung YC*. Tissue remodeling of rat pulmonary artery in hypoxic breathing-I. Changes of morphology, zero-stress state and gene expression. *Ann Biomed Eng*. 29:535-51, 2001.
30. Huang W, Sher YP, Peck K, Fung YC*. Correlation of gene expression with

physiological functions: Examples of pulmonary blood vessel rheology, hypoxic hypertension, and tissue remodeling. *Biorheology* 38(2-3): 75-87, 2001.

31. Peck K, Sher YP, Shih JY, Roffler SR, Wu CW and Yang PC*. Detection and Quantitation of Circulating Cancer Cells in the Peripheral Blood of Lung Cancer Patients. *Cancer Res.* 58: 2761-5, 1998.
32. Liu SJ, Sher YP, Ting CC and Tao MH*. Treatment of B-cell Lymphoma with Chimeric IgG and Single-chain Fv Antibody-interleukin 2 Fusion Proteins. *Blood.* 92: 2103-12, 1998.
33. Chen JJW, Wu R, Yang PC, Huang JY, Sher YP, Han MH, Kao WC, Lee PJ, Chiu TF, YW Chu, Wu CW and Peck K*. Profiling Expression Patterns & Isolating Differentially Expressed Genes by cDNA Microarray System with Colorimetry Detection. *Genomics.* 51: 313-24, 1998.

Book chapter:

1. "cDNA Microarrays on Nylon Filter Membrane With Colorimetric Detection", Konan Peck and Yuh-Pyng Sher, in *DNA Microarrays: Gene Expression Applications* ed. Bertrand R. Jordan, Springer-Verlag, 35-54, 2001.
2. "Application of Enzyme Colorimetry for cDNA Microarray Detection", Konan Peck and Yuh-Pyng Sher, in *BioChip Technology*, eds. Jing Cheng & Larry J. Kricka, Harwood Academic Publishers, 325-340, 2001.

Patent:

1. Kung PC, Peck K, Lee YS, Sher YP, Cheng YC. Phytomics: A Genomic-based Approach to Herbal Compositions. US patent 2003/0207270 A1. (2003 published)
2. Peck K, Sher YP, Yang PC, Shih JY, Wu CW. Rapid efficacy assessment method for lung cancer therapy. US patent #7507534B2 (2009 published)

Technology transfer:

Peck K, Sher YP, Kao WC. Construction of cDNA microarray. (2001)

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