
BIOGRAPHICAL SKETCH

NAME in English Yu-sun Chang	POSITION TITLE Professor, Graduate Institute of Biomedical Sciences
NAME in Chinese 張玉生	

EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
National Chung-Hsing University	B.S.	06/71	Botany
Brigham Young University, Utah	M.S.	05/73	Plant Biochemistry
University of California, Davis	Ph.D.	05/86	Microbiology
University of California, Davis	Postdoctoral	08/86	Microbiology

A. Positions and Honors

Positions and Employment

2005-	Director, Chang Gung Molecular Medicine Research Center
1999-	Professor, Graduate Institute of Biomedical Sciences (former Graduate Institute of Basic Medical Sciences), School of Medicine Chang-Gung University
1999-2001	Professor and Director Graduate Institute of Basic Medical Sciences Chang-Gung University School of Medicine
1994-1999	Professor Department of Microbiology & Immunology Chang-Gung University School of Medicine
1996-1998	Chairperson Committee for Chang-Gung Medical Research Program
1995-date	Adjunct Professor Institute of Microbiology and Immunology National Yang-Ming University
1986-1994	Associate Professor Department of Microbiology & Immunology Chang-Gung College of Medicine and Technology
1989-1995	Adjunct Associate Professor Graduate Institute of Microbiology and Immunology National Yang-Ming University
1986	Postdoctoral fellowship, University of California, Davis
1983-1986	Research Fellow, U.S. Defense Department
1981-1983	Teaching Assistant, Department of Bacteriology University of California, Davis

Other Experience and Professional Memberships

Local Activities (past and current)

Co- Coordinator “Rational Drug Development” Program, Striving for Excellency of Universities, National Tsing-Hua University, granted by Administration of Education, Taiwan, ROC

Member and Chair, Study section of Microbiology and Immunology, National Science Council
Member, Cancer Prevention Committee, Department of Health, Taiwan, ROC
Member and co-Coordinator, Study Session of National Research Program for Genomic Medicine-Innovative Research
2005-2009 教育部顧問室「生物及醫學科技人才培育先導型計畫」
基因體與蛋白質體醫學規劃委員
2009教育部顧問室「轉譯醫學及農學人才培育先導型計畫」之
轉譯醫學計畫審查委員
中華民國細胞及分子生物學學會理事

International activities

Member, International Association of Epstein-Barr Virus and Associated Diseases
Governing Board 2008-2010, International Association of Epstein-Barr Virus and Associated Diseases
Member, Chang Gung Nasopharyngeal Carcinoma Biomarker Discovery Team in International Cancer Biomarker
Discovery Consortium (organized by Fred Hutchinson Cancer Research Center)
Member, International NPC Working Team (organized by National Cancer Institute, USA)

B. Selected Peer-reviewed Publications (2005-2010) (in chronological order)

1. Chih-ching Wu, Kuan-yi Chien, Ngan-ming Tsang, Kai-ping Chang, Shen-po Hao, Chuang-hui Tsao, **Yu-sun Chang**, and Jao-song Yu. 2005. Cancer cell-secreted proteomes as a basis for searching potential tumor markers-nasopharyngeal carcinoma as a model. *Proteomics* 5(12):3173-82.
2. Pan YR, Fang CY, **Chang YS**, and Chang HY. 2005. Analysis of Epstein-Barr virus gene expression upon phorbol ester and hydroxyurea treatment by real-time quantitative PCR. *Archives of Virology* 150:755-770.
3. Hsin-Pai Li, Yu-Wei Leu, and **Yu-Sun Chang**. 2005. Epigenetic changes in virus-associated human cancers. *Cell Research* 15:262-271.
4. Kang-Mai Wu, Chang-Jen Huang, Sheng-Ping Hunag, and **Yu-Sun Chang**. 2006. Molecular cloning, expression and characterization of the zebrafish *bram1* gene, a BMP receptor-associated molecule" *J. Biomedical Sciences* 3: 345-355.
5. Yu-Hua Hsieh, Hao-Ping Liu, Szechang J. Lo, and **Yu-Sun Chang**. 2006. Tumor regression by expression of high physiological levels of EBV latent membrane protein 1. *Cancer Biology & Therapy* 5(3):310-317.
6. Hao-Ping Liu, Chih-Ching Wu, and **Yu-sun Chang**. 2006. PRA1 promotes the intracellular trafficking and NF- B signaling. *EMBO J.* 25: 4120-4130.
7. Chien KY, **Chang YS**, Yu JS, Fan LW, Lee CW and Chi LM. 2006. Identification of a new in vivo phosphorylation site in the cytoplasmic carboxyl terminus of EBV-LMP1 by tandem mass spectrometry. *Biochem Biophys Res Commun.* 348(1):47-55.
8. Chia-Lung Tsai, Hsin-Pai Li, Yen-Jung Lu, Chuen Hsueh, Ying Liang, Chi-Long Chen, Sai Wah Tsao, Ka-Po Tse, Jau-Song Yu and **Yu-Sun Chang**. 2006. Activation of DNA methyltransferase 1 by Epstein-Barr Virus LMP1 involves JNK signaling. *Cancer Research* 66:11668-11676.
9. Huang W-C, Hsu R-M, Chi L-M, Leu Y-L, **Chang Y-S** and Yu J-S. 2007. Selective downregulation of EGF receptor and downstream MAPK pathway in human cancer cell lines by active components partially purified from the seeds of *Livistona chinensis* R. Brown. *Cancer Lett.* 248: 137-146.
10. Fang CY, Chiang CY, Pan YR, Tse KP, **Chang YS**, Chang HY. 2007. Modulation of Epstein-Barr virus latent membrane protein 1 activity by intrabodies. *Intervirology.* 50(4):254-263.
11. Ka-Po Tse, Nang-Ming Tsang, Kung-Den Chen, Hsin-Pai Li, Ying Liang, Chuen Hsueh, Kai-Ping Chang, Jau-Song Yu, Sheng-Po Hao, Ling-Ling Hsieh, and **Yu-Sun Chang**. 2007. MCP-1 Promoter Polymorphism at -2518 is Associated with Metastasis of Nasopharyngeal Carcinoma after Treatment. *Clinical Cancer Research* 13(21):6320-6326.
12. Kai-Ping Chang, Cheng-Lung Hsu, Yu-Liang, Ngan-Ming Tsang, Chin-Kuo Chen, Ta-Jen Lee, Kuo-Chien Tsao, Chung-Guei Huang, **Yu-sun Chang**, Jao-Song Yu, Sheng-Po Hao. 2008. Complementary serum test of antibodies to Epstein-Barr virus nuclear antigen-1 and early antigen: A possible alternative for primary screening of nasopharyngeal carcinoma. *Oral Oncology* 44(8):784-792.
13. Kai-Ping Chang, Sheng-Po Hao, Jui-Hung Chang, Chih-Ching Wu, Ngan-Ming Tsang, Yun-Shien Lee, Cheng-Lung Hsu, Shir-Hwa Ueng, Shiau-Chin Liu, Yu-Lun Liu, Pei-Cih Wei, Yin Liang, **Yu-sun Chang**, Jao-Song Yu. 2008. Macrophage Inflammatory Protein-3 Is a Novel Serum Marker for Nasopharyngeal Carcinoma Detection and Prediction of Treatment Outcomes. *Clinical Cancer Research* 14(21):6979-6987.

14. Chih-Ching Wu, Hua-Chien Chen, Su-Jen Chen, Hao-Ping Liu, Yi-Yueh Hsieh, Chia-Jung Yu, Reiping Tang, Ling-Ling Hsieh, Jao-Song Yu, and **Yu-sun Chang**. 2008. Identification of collapsing response mediator protein-2 as a potential marker of colorectal carcinoma by comparative analysis of cancer cell secretomes. *Proteomics* 8: 316-332.
15. Lih-Chyang Chen, Chuen Hsueh, Ngan-Ming Tsang, Ying Liang, Kai-Ping Chang, Sheng-Po Hao, Jau-Song Yu, **Yu-Sun Chang**. 2008. Heterogeneous Ribonucleoprotein K and Thymidine Phosphorylase are Independent Prognostic and Therapeutic Markers for Nasopharyngeal Carcinoma. *Clinical Cancer Research* 14(12):3807-3813.
16. Chih-Ching Wu, Pei-Hua Peng, Ya-Ting Chang, Yu-Shan Huang, Kai-Ping Chang, Sheng-Po Hao, Nang-Ming Tsang, Chau-Ting Yeh, **Yu-Sun Chang** and Jau-Song Yu. 2008. Identification of potential serum markers for nasopharyngeal carcinoma from a xenografted mouse model using Cy dye labeling combined with three-dimensional fractionation. *Proteomics* 8(2):3605-3620.
17. Chih-Ching Wu, Yu-Shan Huang, Li-Yu Lee, Ying Liang, Rei-Ping Tang, **Yu-Sun Chang**, Ling-Ling Hsieh, and Jau-Song Yu. 2008. Overexpression and elevated plasma level of tumor-associated antigen 90K/Mac-2 binding protein in colorectal carcinoma. *PROTEOMICS-Clinical Applications* (accepted)
18. Chow KP, Wu CC, Chang HY, Chang C, **Chang YS**. 2008. A simplified tumour model established via Epstein-Barr virus-encoded, nasopharyngeal carcinoma-derived oncogene latent membrane protein 1 in immunocompetent mice. *Lab Anim.* 42(2): 193-203.
19. Pan YR, Vatsyayan J, **Chang YS**, Chang HY. 2008. Epstein-Barr virus latent membrane protein 2A upregulates UDP-glucose dehydrogenase gene expression via ERK and PI3K/Akt pathway. *Cell Microbiol.* (published on line)
20. Chang, Po-Ling, **Yu-sun Chang**, Jian-Hung Chen, Shu-Jen Chen and Hua-Chien Chen. 2008. Analysis of BART7 microRNA from Epstein-Barr virus-infected nasopharyngeal carcinoma cells by capillary electrophoresis. *Analytical Chemistry* 80: 8554-8560.
21. Hui-Ping Chien, **Yu-Sun Chang**, Pei-Sung Hsu, Jen-Der Lin, Yi-Chin Wu, Hui-Lang Chang, Cheng-Keng Chuang, Ke-Hung Hsueh, Chuen Hsueh. 2008. Adrenal Cystic Lesions : A Clinicopathological Analysis of 25 Cases with Proposed Histogenesis and Review of the Literature. *Endocr Pathol* 19 : 274-281
22. Chen HC, Chen GH, Chen YS, Liao WL, Liu CY, Chang KP, **Chang YS**, Chen SJ*. (2009) MicroRNA Deregulation and Pathway Alterations in Nasopharyngeal Carcinoma. *British Journal of Cancer* 100: 1002-1011. (SCI)
23. Lih-Chyang Chen, Hao-Ping Liu, Hsin-Pai Li, Chuen Hsueh, Jau-Song Yu, Chih-Lung Liang, **Yu-Sun Chang**. 2009. Thymidine phosphorylase mRNA stability and protein levels are increased through ERK-mediated cytoplasmic accumulation of hnRNP K in nasopharyngeal carcinoma cells. *Oncogene* 28 : 1904-1915. (SCI)
24. Chi L-M, Lee C-W, Chang K-P, Hao S-P, Lee H-M, Liang Y, Hsueh C, Yu C-J, Lee I-N, Chang Y-J, Lee S-Y, Yeh Y-M, **Chang Y-S**, Chien K-Y* and Yu J-S*. 2009. Enhanced interferon signaling pathway in oral cancer revealed by quantitative proteome analysis of microdissected specimens using ¹⁶O/¹⁸O labeling and integrated 2DLC-ESI-MALDI tandem MS. *Mol. Cell. Proteomics* 8: 1453-1474. (SCI)
25. Ka-Po Tse, Wen-Hui Su, Kai-Ping Chang, Ngan-Ming Tsang, Chia-Jung Yu, Petrus Tang, Lee-Chu See, Chuen Hsueh, Min-Lee Yang, Sheng-Po Hao, Hong-Yi Li, Ming-Hsi Wang, Li-Ping Liao, Lih-Chyang Chen, Sheue-Rong Lin, **Yu-Sun Chang** and Yin Yao Shugart. 2009. Genome-wide association study reveals multiple Nasopharyngeal Carcinoma-associated loci within the HLA region at Chromosome 6p21.3. *American Journal of Human Genetics* 85(2):194-20380. (Corresponding) (SCI)
26. Chang-Yi Lu, Sen-Yung Hsieh, Yen-Jung Lu, Chi-Sheng Wu, Lih-Chyang Chen, Shao-Jung Lo, Cheng-Tao Wu, Min-Yuan Chou, Tim Hui-Ming Huang, and **Yu-Sun Chang**. 2009. Aberrant DNA Methylation Profile and Frequent Methylation of *KLK10* and *OXGR1* Genes in Hepatocellular Carcinoma. *Genes, Chromosomes and Cancer* 48:1057-1068. (SCI)
27. Yen-Jung Lu, Chi-Sheng Wu, Hsin-pai Li, Yu-Wei Leu, Chia-Siu Wang, Kuang-Hui Lin, and **Yu-Sun Chang**. 2009. Low density lipoprotein-related protein 1B (LRP1B) silencing by DNA methylation impairs tumor suppressor function in gastric cancer. *Genes, Chromosomes and Cancer* 48(12):1057-68. (SCI)
28. Wang C-L, Wang C-I, Liao P-C, Liang Y, Chen C-D, Liang Y, Chuang W-Y, Tsai Y-H, Chen H-C, **Chang Y-S**, Yu J-S, Wu C-C, and Yu C-J. 2009. Discovery of retinoblastoma-associated binding protein 46 as a novel prognostic marker for distant metastasis in non-small cell lung cancer by combined analysis of cancer cell secretome and pleural effusion proteome. *J. Proteome Res.* 10: 4428-4440. (SCI)
29. Chang K-P, Wu C-C, Chen H-C, Chen S-J, **Peng P-H**, Tsang N-M, Lee L-Y, Liu S-C, Liang Y, Lee, Y-S, Hao S-P, **Chang Y-S**, and Yu J-S. 2010. Identification of candidate nasopharyngeal carcinoma serum biomarkers by cancer cell secretome and tissue transcriptome analysis: potential usage of cystatin a for predicting nodal stage and poor prognosis. *Proteomics*. 2010 May 11. [Epub ahead of print] (SCI)

30. Chi-Sheng Wu, Yen-Jung Lu, Hsin-Pai Li, Chang-Yi Lu, Yu-Wei Leu, Chia-Siu Wang, Kuang-Hui Lin, Tim Hui-Ming Huang and **Yu-Sun Chang**. 2010. Glutamate receptor, ionotropic, kainite 2 silencing by DNA hypermethylation possesses tumor suppressor function in gastric cancer. *International Journal of Cancer* 126(11):2542-52. (SCI)
31. Wu C-C, Hsu C-W, Chen C-D, Yu C-J, Chang K-P, Dai D-I, Liu H-P, Su W-H, **Chang Y-S**, and Yu J-S. 2010. Candidate serological biomarkers for cancer identified from the secretomes of 23 cancer cell lines and the human protein atlas. *Mol. Cell. Proteomics*. Feb 1. [in press] (SCI)
32. Lih-Chyang Chen, Yi-Che Chung, Chuen Hsueh, Ngan-Ming Tsang, Lang-Ming Chi, Ying Liang, Chun-Chin Chen, Li-Jie Wang, and **Yu-Sun Chang**. 2010. The anti-apoptotic protein, FLIP, is regulated by heterogeneous nuclear ribonucleoprotein K and correlates with poor overall survival of nasopharyngeal carcinoma patients. *Cell Death and Differentiation* 17, 1463–1473 (SCI)
33. Chen CC, Chen LC, Liang Y, Tsang NM, **Chang YS**. 2010. Epstein-Barr virus latent membrane protein 1 induces the chemotherapeutic target, thymidine phosphorylase, via NF-kappaB and p38 MAPK pathways. *Cell Signalling*. 22(7):1132-42. (SCI)
34. Chen JS, Chen KT, Fan WC, Yu JS, **Chang YS**, Chan EC. 2010. Combined analysis of survivin autoantibody and carcinoembryonic antigen biomarkers for improved detection of colorectal cancer. *Clin Chem Lab Med*. 48(5):719-25. (SCI)
35. Chen, Jinn-Shiun; Chen, Kuei-Tien; Fan, Chung-Wei; Han, Chia-Li; Chen, Yu-Ju; Yu, Jau-Song; **Chang, Yu-Sun**; Chien, Chih-Wei; Wu, Chien-Peng; Hung, Ray-Ping; Chan, Err-Cheng. 2010. Comparison of membrane fraction proteomic profiles of normal and cancerous human colorectal tissues with gel-assisted digestion and iTRAQ labeling mass spectrometry. *FEBS Journal* 277:3028-38.
36. Hsueh C, **Chang YS**, Tseng NM, Liao CT, Hsueh S, Chang JH, Wu IC, Chang KP. 2010. Expression pattern and prognostic significance of claudins 1, 4, and 7 in nasopharyngeal carcinoma. *Hum Pathol*. 2010 Mar 22. [Epub ahead of print]
37. Kai-ping Chang, Ya-Ting Chang, Chih-Ching Wu, Yu-Ling Liu, Min-Chi Chen, Ngan-Ming Tsang, Cheng-Lung Hsu, **Yu-Sun Chang**, and Jau-Song Yu. 2010. Multiplexed immunobead-based profiling of cytokine markers for detection of nasopharyngeal carcinoma and prognosis of patient survival. *Head and Neck*. (accepted)
38. Hao-Ping Liu, Chih-Ching Wu, Hung-Yi Kao, Yi-Chuan Huang, Ying Liang, Chia-Chun Chen, Jau-Song Yu, **Yu-Sun Chang**. 2010. Proteome-wide dysregulation by PRA1 depletion delineates a role of PRA1 in lipid transport and cell migration. *Mol. Cellular Proteomics* (in press)
39. Wang CI, Wang CL, Wang CW, Chen CD, Wu CC, Tsai YH, **Chang YS**, Yu JS, Yu CJ. 2010. Importin subunit alpha-2 is identified as a potential biomarker for non-small cell lung cancer by integration of the cancer cell secretome and tissue transcriptome” *International Journal of Cancer* (accepted)
40. Lih-Chyang Chen, Chia-Chun Chen, Ying Liang, Ngan-Ming Tsang, **Yu-Sun Chang**, Chuen Hsueh. 2010. A novel function for TNFAIP2: promotion of migration and metastasis in nasopharyngeal carcinoma. (Accepted)
41. Hao-Ping Liu, Pei-Jung Chung, Chih-Lung Liang, and **Yu-Sun Chang**. 2010. The MYND domain-containing protein BRAM1 inhibits lymphotoxin beta receptor-mediated signaling through affecting receptor oligomerization *Cellular Signalling* (Accepted)
42. Shu-Huei Hsiao, Kuan-Der Lee, Chia-Chen Hsu, Min-Jen Tseng, Victor Jin, Wei-Sheng Sun, Yi-Chen Hung, Kun-Tu Yeh, Pearlly Yan, Yen-Yu Lai, H. Sun, Yen-Jung Lu, **Yu-Sun Chang**, Shaw-Jenq Tsai, Tim Huang, Yu-Wei Leu. 2010. DNA methylation of the Trip10 promoter accelerates mesenchymal stem cell lineage determination. *BBRC* (Accepted)
43. Chen JS, Chou YP, Chen KT, Hung RP, Yu JS, **Chang YS**, Chan EC. 2010. Detection of Annexin A Autoantibodies in Sera From Colorectal Cancer Patients. *J Clin Gastroenterol*. (In press).
44. Chen SJ, Chen GH, Chen YH, Liu CY, Chang KP, **Chang YS** and Chen HC, 2010. Characterization of Epstein-Barr Virus miRNAome in Nasopharyngeal Carcinoma by Deep Sequencing. *PLoSOne* (Accepted)
45. Yi-Ting Chen, Jau-Song Yu, Chien-Lun Chen, Hsiao-Wei Chen, Ting Chung, Chih-Ching Wu, Chi-De Chen, Chia-Wei Hsu, Meng-Chieh Chen, Ke-Hung Tsui, Phei-Lang Chang, **Yu-Sun Chang**. 2010. Discovery of Novel Bladder Cancer Biomarkers by Comparative Urine Proteomics Using iTRAQ Technology. *Journal of Proteome Research* (Accepted)

C. Research Support

Ongoing Research Support

R01 NSC-97-3112-B-182-008 NSC-98-3112-B-182-006 NSC-99-3112-B-2008/05/01-2011/04/30

Genome-wide association study for searching susceptibility genes of nasopharyngeal carcinoma and the interaction with Epstein-Barr virus

Role: PI

R01 NSC-97-2320-B-182-001-MY3

2008/08/01-2011/07/31

Role EBV LMP1-mediated NF- κ B-regulated biomarkers and potential roles in NPC biology:

Role: PI

Completed Research Support (2006-2010)

R01 NSC95-2320-B-182-001

2005/05/01~2008/04/30

Role of EBV in human normal epithelial cell differentiation

Role: PI

R01 NSC 95-2320-B-182-001

2005/08/01~2008/07/31

Identification of NF- κ B regulated biomarkers for NPC and role of thymidine phosphorylase in NPC biology

Role: PI