
BIOGRAPHICAL SKETCH

NAME in English Yu-Sun Chang	POSITION TITLE Chair Professor Graduate Institute of Biomedical Sciences Chang Gung University
NAME in Chinese 張玉生	

EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
University of California, Davis, California	Ph.D.	06/1986	Microbiology
Brigham Young University, Provo, Utah	M.S.	06/1973	Plant Biochemistry
National Chung Hsing University	B.S.	06/1971	Botany

A. Positions and Honors

Positions and Employment

2014-	Chair Professor, Graduate Institute of Biomedical Sciences
2005-2016	Director, Chang Gung Molecular Medicine Research Center
2012-2014	Distinguished Professor, Graduate Institute of Biomedical Sciences
1999-2001	Professor and Director, Graduate Institute of Basic Medical Sciences, CGU
1999-2012	Professor, Graduate Institute of Biomedical Sciences (former Graduate Institute of Basic Medical Sciences), CGU
1994-1999	Professor, Department of Microbiology & Immunology, CGU
1996-1998	Chairperson, Committee for Chang Gung Medical Research
1995-2004	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

Professional Memberships

International

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)

Member, Clinical Proteomic Tumor Analysis Consortium (CPTAC) of National Cancer Institute, USA

Member, International Cancer Proteogenome Consortium (ICPC) or Cancer Moonshot project, National Cancer Institute, USA

Local

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 (國科會微生物及免疫學門召集人、複審委員)

Member and co-Coordinator, Study Session of National Research Program for Genomic Medicine-Innovative Research Section

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

2009-2013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

中華民國蛋白質體學學會理事

國民健康署癌症防治政策委員會

Journal reviewer

Journal of Biomedical Science, British Journal of Cancer, International Journal of Cancer, Cancer Letters, Cancer Science, Journal of Virology, Journal of General Virology, Virology, Journal of Virological Methods, Antioxidants and Redox Signaling, Journal of Biomedicine and Biotechnology, Neoplasia, Cancer, DNA and Cell Biology, Journal of Translational Medicine, Proteomics, Oncogene, Biomedical Journal, Tumor Biology, Oncotarget, Molecular Cellular Proteomics, Nature Genetics

Honors

2002/2011/2014 Excellency in Research Award (傑出獎), Ministry of Science and Technology (National Science Council). Taiwan ROC

2015 Wang-Ming Ling Memorial Foundation Award for Distinguished Biomedical Research

2015 Distinguished Alumni Award, National Chung Hsing University

2002/2014 Faculty Research Award (研究獎), Chang Gung University

2012 Technology Development and Industry Collaboration Award (技合獎), Chang Gung University

1996-2001 Research Award (優等獎), National Science Council, Taiwan ROC

B. Selected Peer-reviewed Publications (2012-2017) (in chronological order)

Referred papers (*first/equal contribution or corresponding author)

119. Chao YK, Chuang WY, Yeh CJ, **Chang YS**, Wu YC, Kuo SY, Hsieh MJ, Hsueh C. 2012. High phosphorylated 4E-binding protein 1 expression after chemoradiotherapy is a predictor for locoregional recurrence and worse survival in esophageal squamous cell carcinoma patients. *J Surg Oncol.* 105(3):288-92.
120. Chang KP, Yu JS, Chien KY, Lee CW, Liang Y, Liao CT, Yen TC, Lee LY, Huang LL, Liu SC, **Chang YS**, Chi LM. 2011. Identification of PRDX4 and P4HA2 as Metastasis-Associated Proteins in Oral Cavity Squamous Cell Carcinoma by Comparative Tissue Proteomics of Microdissected Specimens Using iTRAQ Technology. *J Proteome Res.* 2011 Nov 4;10(11):4935-47. Epub 2011 Sep 28.
121. Wu CS, Chang KP, Chen LC, Chen CC, Liang Y, Hsueh C, ***Chang YS**. 2012. Heterogeneous ribonucleoprotein K and thymidine phosphorylase are independent prognostic and therapeutic markers for oral squamous cell carcinoma. *Oral Oncol.* 48(6):516-22
122. Liu HP, Chen CC, Wu CS, Huang YC, Liu SC, Liang Y, Chang KP, and ***Chang YS**. 2012. Epstein-Barr Virus-Encoded Latent Membrane Protein 1 Interacts with FGD4 to Activate Cdc42 and Thereby Promote Migration of Nasopharyngeal Carcinoma Cells. *PLoS Pathogens.* 8 (5) : e1002690
123. Yi YH, **Chang YS**, Lin CH, Lew TS, Tang CY, Tseng WL, Tseng CP, Lo SJ. 2012. Integrin-mediated Membrane Blebbing is Dependent on Sodium-Proton Exchanger 1 and Sodium-Calcium Exchanger 1 Activity. *J Biol Chem.* 2012 Jan 23. [Epub ahead of print]
124. Chen YT, Chen HW, Domanski D, Smith DS, Liang KH, Wu CC, Chen CL, Chung T, Chen MC, **Chang YS**, Parker CE, Borchers CH, Yu JS. 2012. Multiplexed quantification of 63 proteins in human urine by

- multiple reaction monitoring-based mass spectrometry for discovery of potential bladder cancer biomarkers. *J Proteomics*. 75(12):3529-45.
125. Wang IS, Lin YT, Huang CH, Lu TF, Lue CE, Yang P, Pijanswska DG, Yang CM, Wang JC, Yu JS, **Chang YS**, Chou C, and Lai CS. 2012 Immobilization of enzyme and antibody on ALD-HfO₂ EIS structure by NH₃ plasma treatment. *Nanoscale Research Letters*, 7:179
 126. Tse KP, Wu CS, Hsueh C, Chang KP, Hao SP, **Chang YS** and Tsang NM. 2012. The Relationship between Secretory Leukocyte Protease Inhibitor Expression and Epstein-Barr Virus Status among Patients with Nasopharyngeal Carcinoma. *ANTICANCER RESEARCH* 32: 1299-1308.
 127. Su LC, Chang CM, Tseng YL, Chang YF, Li YC, **Chang YS**, and Chou C*. 2012. Rapid and Highly Sensitive Method for Influenza A (H1N1) Virus Detection. *Analytical Chemistry* 84(9):3914-20.
 128. Li YC, Chiou CC, Luo JD, Chen WJ, Su LC, Chang YF, **Chang YS**, Lai CS, Lee CC, Chou C. 2012. Sensitive detection of unlabeled oligonucleotides using a paired surface plasma waves biosensor. 2012. *Biosensors and Bioelectronics* 35:342– 348.
 129. Chao CH, Chang YF, Chen HC, Lin LY, Yu PC, **Chang YS**, Lee YJ, Chou C. 2012. Detection of urine cofilin-1 from patients hospitalized in the intensive care unit using the metal-enhanced fluorescence technique, *Sensors and Actuators B*:173:184-190.
 130. Wang LJ, Hsu CW, Chen CC, Liang Y, Chen LC, Ojcius DM, Tsang NM, Hsueh C, Wu CC, and ***Chang YS**. 2012. Interactome-wide analysis identifies End-Binding Protein 1 as a crucial component for the speck-like particle formation of activated AIM2 inflammasomes. *Mol Cell Proteomics*. 11(11):1230-44.132.
 131. Chen LC, Wang LJ, Tsang NM, Ojcius DM, Chen CC, OuYang CN, Hsueh C, Liang Y, Chang KP, Chen CC, and * **Chang YS**. 2012. Tumor inflammasome-derived IL-1 β recruits neutrophils and improves local recurrence-free survival in EBV-induced nasopharyngeal carcinoma. *EMBO Mol Med*. Dec;4(12):1276-93.
 132. Hsu WL, Tse KP, Liang S, Chien YC, Su WH, Yu KJ, Cheng YJ, Tsang NM, Hsu MM, Chang KP, Chen IH, Chen TI, Yang CS, Goldstein AM, Chen CJ, ***Chang YS (corresponding)**, Hildesheim A. 2012. Evaluation of Human Leukocyte Antigen-A (HLA-A), Other Non-HLA Markers on Chromosome 6p21 and Risk of Nasopharyngeal Carcinoma. *PLoS One*.7(8):e42767.
 133. Wang CI, Chien KY, Wang CL, Liu HP, Cheng CC, **Chang YS**, Yu JS, Yu CJ. 2012. Quantitative proteomics reveals regulation of KPNA2 and its potential novel cargo proteins in non-small cell lung cancer. *Molecular Cellular Proteomics* 11(11):1105-22. 135.
 134. Hsueh C, Lin JD, **Chang YS**, Hsueh S, Chao TC, Yu JS, Jung SM, Tseng NM, Sun JH, Kuo SY, Ueng SH. 2012. Prognostic significance of pituitary tumor-transforming gene-binding factor (PBF) expression in papillary thyroid carcinoma. *Clin Endocrinol (Oxf)*. 2012 Aug 13. doi: 10.1111/cen.12007. [Epub ahead of print]
 135. Chen CL, Lai YF, Tang P, Chien KY, Yu JS, Tsai CH, Chen HW, Wu CC, Chung T, Hsu CW, Chen CD, **Chang YS**, Chang PL, Chen YT. 2012. Comparative and targeted proteomic analyses of urinary microparticles from bladder cancer and hernia patients. *J Proteome Res*. 2012 Dec 7;11(12):5611-29.
 136. Ueng SH, Chen SC, **Chang YS**, Hsueh S, Lin YC, Chien HP, Lo YF, Shen SC, Hsueh C. 2012. Phosphorylated mTOR expression correlates with poor outcome in early-stage triple negative breast carcinomas. *Int J Clin Exp Pathol* 5:806-13.
 137. Chen HC, **Chang YS**, Chen SJ, Chang PL. 2012. Determination of the heterogeneity of DNA methylation by combined bisulfite restriction analysis and capillary electrophoresis with laser-induced fluorescence. *J. Chromatogr. A*. 1230:123-129
 138. Hsu CL, Chang KP, Lin CY, Chang HK, Wang CH, Lin TL, Liao CT, Tsang NM, Lee LY, Chan SC, Ng SH, Li HP, **Chang YS**, Wang HM. 2012. Plasma Epstein-Barr virus DNA concentration and clearance rate as novel prognostic factors for metastatic nasopharyngeal carcinoma. *Head Neck* 34(8):1064-70.
 139. Chang YF, Yu JS, Chang YT, Su LC, Wu CC, **Chang YS**, Lai CS, Chou C. 2013. The utility of a high-throughput scanning biosensor in the detection of the pancreatic cancer marker ULBP2. *Biosens Bioelectron*. 15;41:232-7
 140. Chuang WY, **Chang YS**, Yeh CJ, Wu YC, Hsueh C. 2013. Role of podoplanin expression in squamous cell carcinoma of upper aerodigestive tract. *Histol Histopathol*. 28(3):293-9.
 141. Hsueh C, Lin JD, **Chang YS**, Hsueh S, Chao TC, Yu JS, Jung SM, Tseng NM, Sun JH, Kuo SY and Ueng SH. 2013. Prognostic significance of pituitary tumour-transforming gene-binding factor (PBF) expression in papillary thyroid carcinoma. *Clinical Endocrinology* 78, 303–309.

142. Lin YH, Chen YJ, Lai CS, Chen YT, Chen CL, Yu JS, **Chang YS**. 2013. A negative-pressure-driven microfluidic chip for the rapid detection of a bladder cancer biomarker in urine using bead-based enzyme-linked immunosorbent assay. *Biomicrofluidics*. 7(2):24103.
143. Chen CL, Lin TS, Tsai CH, Wu CC, Chung T, Chien KY, Wu M, **Chang YS**, Yu JS, Chen YT. 2013. Identification of Potential Bladder Cancer Markers in Urine by Abundant-Protein Depletion Coupled with Quantitative Proteomics. *J Proteomics Res*. 85:28-43.
144. Chang KP, Wang CL, Kao HK, Liang Y, Liu SC, Huang LL, Hsieh C, Hsieh YJ, Chien KY, **Chang YS**, Yu JS, Chi LM. 2013. Overexpression of caldesmon is associated with lymph node metastasis and poorer prognosis in patients with oral cavity squamous cell carcinoma. *Cancer* 119: 4003-4011.
145. Liu SC, Tsang NM, Chiang WC, Chang KP, Hsueh C, Liang Y, Juang JL, Chow KP, ***Chang YS**. 2013. Leukemia inhibitory factor regulates p70S6K and DNA damage responses to promote aggressiveness and radioresistance of nasopharyngeal carcinoma in humans and mice. *J Clinical Investigation* 123(12):5269-5283
146. Chen CC, Liu HP, Chao M, Liang Y, Tsang NM, ***Chang YS**. 2013. NF- κ B-mediated transcriptional upregulation of TNFAIP2 by the Epstein-Barr virus oncoprotein, LMP1, promotes cell motility of nasopharyngeal carcinoma. *Oncogene* 33(28):3648-59.
147. Li HP, Peng CC, Chung IC, Huang MY, Huang ST, Chen CC, Chang KP, Hsu CL, **Chang YS**. 2013. Aberrantly hypermethylated homeobox A2 derepresses metalloproteinase -9 through TBP and promotes invasion in nasopharyngeal carcinoma. *Oncotarget* 4(11):2154-2165.
148. Hsin LJ, Kao HK, Chne IH, Tsang NM, Hsu CL, Liu SC, **Chang YS**, Chang KP. 2013. Serum CXCL9 levels are associated with tumor progression and treatment outcome in patients with nasopharyngeal carcinoma. *PLoS One* 8(11):e80052.
149. Su WH, Yao Shugart Y, Chang KP, Tsang NM, Tse KP, **Chang YS**. 2013. How genome-wide SNP-SNP interactions related to nasopharyngeal carcinoma susceptibility. *PLoS One* 8(12):e83034.
150. Su WH, Hildesheim A, **Chang YS**. 2013. Human Leukocyte Antigens and Epstein-Barr Virus-Associated Nasopharyngeal Carcinoma: Old Associations Offer New Clues into the Role of Immunity in Infection-Associated Cancers. *Front Oncol*. 3:299. (Invited Review Article)
151. Yi YH, Chien CH, Chen WW, Ma TH, Liu KY, **Chang YS**, Chang TC, Lo SJ. 2014. Lipid droplet pattern and nondroplet-like structure in two fat mutants of *Caenorhabditis elegans* revealed by coherent anti-Stokes Raman scattering microscopy. *J Biomed Opt* 19(1): 011011.
152. Chung IC, Chen LC, Chung AK, Chao M, Hsueh C, Tsang NM, Chang KP, Liang Y, Li HP, and ***Chang YS**. 2014. Matrix Metalloproteinase 12 Is Induced by Heterogeneous Nuclear Ribonucleoprotein K and Promotes Migration and Invasion in Nasopharyngeal Carcinoma; *BMC Cancer* 14(1):348.
153. Hsu CY, Yi YH, Chang KP, **Chang YS**, Chen SJ, Chen HC. The Epstein-Barr virus-encoded microRNA MiR-BART9 promotes tumor metastasis by targeting E-cadherin in nasopharyngeal carcinoma. *PLoS Pathog*. 2014 Feb 27;10(2):e1003974.
154. Lee CC, Tsai YT, Kao CW, Lee LW, Lai HJ, Ma TH, **Chang YS**, Yeh NH, Lo SJ. 2014. Mutation of a Nopp140 gene *dao-5* alters rDNA transcription and increases germ cell apoptosis in *C. elegans*. *Cell Death Dis*. 5:e1158.
155. Chen CD, Wang CL, Yu CJ, Chien KY, Chen YT, Chen MC, **Chang YS**, Wu CC, Yu JS. 2014. Targeted proteomics pipeline reveals potential biomarkers for the diagnosis of metastatic lung cancer in pleural effusion. *J Proteome Res*. 13(6):2818-29.
156. Hsu A, Chen SJ, **Chang YS**, Chen HC, Chu PH. 2014. Systemic Approach to Identify Serum microRNAs as Potential Biomarkers for Acute Myocardial Infarction. *Biomed Res Int*. 2014:418628.
157. Juo CG, Chen CL, Lin ST, Fu SH, Chen YT, **Chang YS**, Yu JS. 2014. Mass accuracy improvement of reversed-phase liquid chromatography/electrospray ionization mass spectrometry based urinary metabolomic analysis by post-run calibration using sodium formate cluster ions. *Rapid Commun Mass Spectrom*. 28:1813-20.
158. Chung PJ, Chi LM, Chen CL, Liang CL, Lin CT, Chang YX, Chen CH, **Chang YS**. 2014. microRNA-205 targets tight junction-related proteins during urothelial cellular differentiation. *Mol Cell Proteomics* 13(9):2321-36.
159. Liu SC and ***Chang YS**. 2014. Role of leukemia inhibitory factor in nasopharyngeal carcinogenesis. *Molecular and Cellular Oncology Vol 1(1)*:e29900. (invited review article)
160. Shih YC, Liao CR, Chung IC, **Chang YS**, Chang PL. Simultaneous separation of five major ribonucleic acids by capillary electrophoresis with laser-induced fluorescence in the presence of electroosmotic flow:

- application to the rapid screening of 5S rRNA from ovarian cancer cells. *Analytica Chimica Acta* 847:73-9.
161. Li HP, Huang HY, Lai YR, Huang JX, Chang KP, Hsueh C and **Chang YS**. 2014. Silencing of miRNA-148a by hypermethylation activates the integrin-mediated signaling pathway in nasopharyngeal carcinoma. *Oncotarget* 5(17):7610-24
 162. Wang LJ, Huang HY, Huang MP, Liou W, Chang YT, Wu CC, Ojcius DM and ***Chang YS**. 2014. The Microtubule-Associated Protein, EB1, Links AIM2 Inflammasomes with Autophagy-Dependent Secretion. *J. Biol. Chem.* 289(42):29322-33.
 163. Hsu CW, Yu JS, Peng PH, Liu SC, **Chang YS**, Chang KP, Wu CC. 2014. Secretome Profiling of Primary Cells Reveals That THBS2 Is a Salivary Biomarker of Oral Cavity Squamous Cell Carcinoma. *J Proteome Res.* 13(11):4796-807.
 164. Chuang WY, Yeh CJ, Chao YK, Liu YH, **Chang YS**, Tseng CK, Chang HK, Wan YL, Hsueh C. 2014. Concordant podoplanin expression in cancer-associated fibroblasts and tumor cells is an adverse prognostic factor in esophageal squamous cell carcinoma. *Int J Clin Exp Pathol.* 15;7(8):4847-56.
 165. Chung WH, Chang WC, Lee YS, Wu YY, Yang CH, Ho HC, Chen MJ, Lin JY, Hui RC, Ho JC, Wu WM, Chen TJ, Wu T, Wu YR, Hsieh MS, Tu PH, Chang CN, Hsu CN, Wu TL, Choon SE, Hsu CK, Chen DY, Liu CS, Lin CY, Kaniwa N, Saito Y, Takahashi Y, Nakamura R, Azukizawa H, Shi Y, Wang TH, Chuang SS, Tsai SF, Chang CJ, **Chang YS**, Hung SI; Taiwan Severe Cutaneous Adverse Reaction Consortium; Japan Pharmacogenomics Data Science Consortium. 2014. Genetic variants associated with phenytoin-related severe cutaneous adverse reactions. *JAMA* 312(5):525-34.
 166. Yang CH, Wang HL, Lin YS, Kumar KP, Lin HC, Chang CJ, Lu CC, Huang TT, Martel J, Ojcius DM, **Chang YS**, Young JD, Lai HC. 2014. Identification of CD24 as a cancer stem cell marker in human nasopharyngeal carcinoma. *PLoS One* 9(6):e99412.
 167. Chao M, Wang Hsiao-Ning, Lu Yi Jin, **Chang Yu-Sun** and Yu Jau-Song. 2015. The V-val subtype Epstein-Barr virus nuclear antigen 1 promotes cell survival after serum withdrawal. *Oncology Reports* 33(2):958-66.
 168. Wang CI, Wang CL, Wu YC, Feng HP, Liu PJ, **Chang YS**, Yu JS, Yu CJ. 2015. Quantitative Proteomics Reveals a Novel Role of Karyopherin Alpha 2 in Cell Migration through the Regulation of Vimentin-pErk Protein Complex Levels in Lung Cancer. *J Proteome Res.* 14(4):1739-51.
 169. Liu PJ, Chen CD, Wang CL, Wu YC, Hsu CW, Lee CW, Huang LH, Yu JS, **Chang YS**, Wu CC, Yu CJ. 2015. In-depth Proteomic Analysis of Six Types of Exudative Pleural Effusions for Nonsmall Cell Lung Cancer Biomarker Discovery. *Mol Cell Proteomics.* 14(4):917-32.
 170. Wu TS, Wang LC, Liu SC, Hsu TY, Lin CY, Feng GJ, Chen JM, Liu HP, Chung IC, Yen TC, **Chang YS**, Liao SK, Chang C, Chow KP. 2015. EBV Oncogene N-LMP1 Induces CD4 T Cell-Mediated Angiogenic Blockade in the Murine Tumor Model. *J Immunol.* pii: 1400794. [Epub ahead of print]
 171. Chen SJ, Liu H, Liao CT, Huang PJ, Hus A, Tang P, **Chang YS**, Chen HC, Yen TC. 2015. Ultra-deep targeted sequencing of advanced oral squamous cell carcinoma identifies a mutation-based prognostic gene signature. *Oncotarget* Jul 20;6(20):18066-80.
 172. Yi YH, Ma TH, Lee LW, Chiou PT, Chen PH, Lee CM, Chu YD, Yu H, Hsiung KC, Tsai YT, Lee CC, **Chang YS**, Chan SP, Tan BC, Lo SJ. 2015. A Genetic Cascade of let-7-ncl-1-fib-1 Modulates Nucleolar Size and rRNA Pool in *Caenorhabditis elegans*. *PLoS Genet.* 2015 Oct 22;11(10):e1005580.
 173. Chuang WY, **Chang YS**, Chao YK, Yeh CJ, Liu YH, Tseng CK, Chang HK, Wan YL, Hsueh C. 2015. High sex determining region Y-box 2 (SOX2) expression correlates with absence of nodal metastasis in esophageal squamous cell carcinoma. *Int J Clin Exp Pathol.* 8(8):9248-55.
 174. Hsu CL, Kuo YC, Huang Y, Huang YC, Lui KW, Chang KP, Lin TL, Fan HC, Lin AC, Hsieh CH, Lee LY, Wang HM, Li HP, **Chang YS**. 2015. Application of a patient-derived xenograft model in cytolytic viral activation therapy for nasopharyngeal carcinoma. *Oncotarget.* 6(31):31323-34.
 175. Chuang WY, Chang H, Shih LY, Wang PN, **Chang YS**, Lin TL, Hung YS, Yeh CJ, Ueng SH, Tang TC, Kuo MC, Dunn P, Wu JH, Kao HW, Ou CW, Wan YL, Hsueh C. 2015. CD5 positivity is an independent adverse prognostic factor in elderly patients with diffuse large B cell lymphoma. *Virchows Arch.* 2015 Sep 14. [Epub ahead of print]
 176. Chang KP, Lin SJ, Liu SC, Yi JS, Chien KY, Chi LM, Kao HK, Liang Y, Lin YT, **Chang YS**, Yu JS. 2015. Low-molecular-mass secretome profiling identifies HMGA2 and MIF as prognostic biomarkers for oral cavity squamous cell carcinoma. *Sci Rep.* 5:11689. doi: 10.1038/srep11689.

177. Lee CW, Chang KP, Chen YY, Liang Y, Hsueh C, Yu JS, **Chang YS**, Yu CJ. 2015. Overexpressed tryptophanyl-tRNA synthetase, an angiostatic protein, enhances oral cancer cell invasiveness. *Oncotarget*. 6(26):21979-92.
178. Chen CL, Chung T, Wu CC, Ng KF, Yu JS, Tsai CH, **Chang YS**, Liang Y, Tsui KH, Chen YT. 2015. Comparative Tissue Proteomics of Microdissected Specimens Reveals Novel Candidate Biomarkers of Bladder Cancer. *Mol Cell Proteomics*. 14(9):2466-78.
179. Chuang WY, **Chang YS**, Chao YK, Yeh CJ, Ueng SH, Chang CY, Liu YH, Tseng CK, Chang HK, Wan YL, Hsueh C. 2015. Phosphorylated mTOR expression correlates with podoplanin expression and high tumor grade in esophageal squamous cell carcinoma. *Int J Clin Exp Pathol*. 8(10):12757-65.
180. Bei JX, Su WH, Ng CC, Yu K, Chin YM, Lou PJ, Hsu WL, McKay JD, Chen CJ, **Chang YS**, Chen LZ, Chen MY, Cui Q, Feng FT, Feng QS, Guo YM, Jia WH, Khoo AS, Liu WS, Mo HY, Pua KC, Teo SH, Tse KP, Xia YF, Zhang H, Zhou GQ, Liu JJ, Zeng YX, and Hildesheim A, International Nasopharyngeal Carcinoma (NPC) Genetics Working Group. 2015. A GWAS Meta-analysis and Replication Study Identifies a Novel Locus within CLPTM1L/TERT Associated with Nasopharyngeal Carcinoma in Individuals of Chinese Ancestry. *CANCER EPIDEMIOLOGY, BIOMARKERS & PREVENTION* 25(1):188-92.
181. Lin CC, Lee CC, Lin SH, Huang PJ, Li HP, **Chang YS**, Tang P, Chao M. 2015. RNA recombination in Hepatitis delta virus: Identification of a novel naturally occurring Recombinant. *Journal of Microbiology, Immunology and Infection* (2015) xx, 1e10
182. Chang PY, Chen CC, **Chang YS**, Tsai WS, You JF, Lin GP, Chen TW, Chen JS, Chan EC. 2016. MicroRNA-223 and microRNA-92a in stool and plasma samples act as complementary biomarkers to increase colorectal cancer detection. *Oncotarget*. 7(9):10663-75.
183. Wang CI, Chen YY, Wang CL, Yu JS, **Chang YS**, Yu CJ. 2016. mTOR regulates proteasomal degradation and Dp1/E2F1- mediated transcription of KPNA2 in lung cancer cells. *Oncotarget*. 7(18):25432-42
184. Hsu CH, Hsu CW, Hsueh C, Wang CL, Wu YC, Wu CC, Liu CC, Yu JS, **Chang YS**, Yu CJ. 2016. Identification and Characterization of Potential Biomarkers by Quantitative Tissue Proteomics of Primary Lung Adenocarcinoma. *Mol Cell Proteomics*. 15(7):2396-410.
185. Wu CS, Chang KP, OuYang CN, Kao HK, Hsueh C, Chen LC, Cheng HY, Liang Y, Liou W, Liang CL, **Chang YS**. 2016. ASC contributes to metastasis of oral cavity squamous cell carcinoma. *Oncotarget*. 7(31):50074-50085.
186. Chen H, Hsiao YC, Chiang SF, Wu CC, Lin YT, Liu H, Zhao H, Chen JS, **Chang YS**, Yu JS. 2016. Quantitative analysis of wild-type and V600E mutant BRAF proteins in colorectal carcinoma using immunoenrichment and targeted mass spectrometry. *Anal Chim Acta*. 933:144-55.
187. Wang HM, Lin TL, Kuo YC, Li HP, Chang KP, Lin CY, Fan HC, Lin AC, Hsieh CH, Tsang NM, Lee LY, Chan SC, Lui KW, **Chang YS**, Hsu CL. 2016. Correlation between overall survival and differential plasma and tissue tumor marker expression in nasopharyngeal carcinoma patients with different sites of organ metastasis. *Oncotarget*. 2016 Jul 18. [Epub ahead of print]
188. Chien HP, Ueng SH, Chen SC, **Chang YS**, Lin YC, Lo YF, Chang HK, Chuang WY, Huang YT, Cheung YC, Shen SC, Hsueh C. 2016. Expression of ROR1 has prognostic significance in triple negative breast cancer. *Virchows Arch*. 468(5):589-95.
189. Fan PC, Chen CC, Chen YC, **Chang YS**, Chu PH. 2016. MicroRNAs in acute kidney injury. *Hum Genomics*. 10(1):29. Review
190. Yu JS, Chen YT, Chiang WF, Hsiao YC, Chu LJ, See LC, Wu CS, Tu HT, Chen HW, Chen CC, Liao WC, Chang YT, Wu CC, Lin CY, Liu SY, Chiou ST, Chia SL, Chang KP, Chien CY, Chang SW, Chang CJ, Young JD, Pao CC, ***Chang YS (co-corresponding)**, ***Hartwell LH**. 2016. Saliva protein biomarkers to detect oral squamous cell carcinoma in a high-risk population in Taiwan. *Proc Natl Acad Sci U S A*. 113(41):11549-11554. (co-Corresponding author)
191. Chung IC, OuYang CN, Yuan SN, Li HP, Chen JT, Shieh HR, Chen YJ, Ojcius DM, Chu CL, Yu JS, **Chang YS**, and Chen LC. 2016. Pyk2 activates the NLRP3 inflammasome by directly phosphorylating ASC and contributes to inflammasome-dependent peritonitis" *Scientific Reports* 6:36214.
192. Shao CH, Chen CL, Lin JY, Chen CJ, Fu SH, Chen YT, **Chang YS**, Yu JS, Tsui KH, Juo CG, Wu KP. 2017. Metabolite marker discovery for the detection of bladder cancer by comparative metabolomics. *Oncotarget*. 2017 Mar 21. doi: 10.18632/oncotarget.16393. [Epub ahead of print]
193. Telomeres Mendelian Randomization Collaboration., Haycock PC, Burgess S, Nounu A, Zheng J, Okoli GN, Bowden J, Wade KH, Timpson NJ, Evans DM, Willeit P, Aviv A, Gaunt TR, Hemani G, Mangino M,

- Ellis HP, Kurian KM, Pooley KA, Eeles RA, Lee JE, Fang S, Chen WV, Law MH, Bowdler LM, Iles MM, Yang Q, Worrall BB, Markus HS, Hung RJ, Amos CI, Spurdle AB, Thompson DJ, O'Mara TA, Wolpin B, Amundadottir L, Stolzenberg-Solomon R, Trichopoulou A, Onland-Moret NC, Lund E, Duell EJ, Canzian F, Severi G, Overvad K, Gunter MJ, Tumino R, Svenson U, van Rij A, Baas AF, Bown MJ, Samani NJ, van t'Hof FN, Tromp G, Jones GT, Kuivaniemi H, Elmore JR, Johansson M, McKay J, Scelo G, Carreras-Torres R, Gaborieau V, Brennan P, Bracci PM, Neale RE, Olson SH, Gallinger S, Li D, Petersen GM, Risch HA, Klein AP, Han J, Abnet CC, Freedman ND, Taylor PR, Maris JM, Aben KK, Kiemeny LA, Vermeulen SH, Wiencke JK, Walsh KM, Wrensch M, Rice T, Turnbull C, Litchfield K, Paternoster L, Standl M, Abecasis GR, SanGiovanni JP, Li Y, Mijatovic V, Sapkota Y, Low SK, Zondervan KT, Montgomery GW, Nyholt DR, van Heel DA, Hunt K, Arking DE, Ashar FN, Sotoodehnia N, Woo D, Rosand J, Comeau ME, Brown WM, Silverman EK, Hokanson JE, Cho MH, Hui J, Ferreira MA, Thompson PJ, Morrison AC, Felix JF, Smith NL, Christiano AM, Petukhova L, Betz RC, Fan X, Zhang X, Zhu C, Langefeld CD, Thompson SD, Wang F, Lin X, Schwartz DA, Fingerlin T, Rotter JI, Cotch MF, Jensen RA, Munz M, Dommisch H, Schaefer AS, Han F, Ollila HM, Hillary RP, Albagha O, Ralston SH, Zeng C, Zheng W, Shu XO, Reis A, Uebe S, Hüffmeier U, Kawamura Y, Otowa T, Sasaki T, Hibberd ML, Davila S, Xie G, Siminovitch K, Bei JX, Zeng YX, Försti A, Chen B, Landi S, Franke A, Fischer A, Ellinghaus D, Flores C, Noth I, Ma SF, Foo JN, Liu J, Kim JW, Cox DG, Delattre O, Mirabeau O, Skibola CF, Tang CS, Garcia-Barcelo M, Chang KP, Su WH, **Chang YS**, Martin NG, Gordon S, Wade TD, Lee C, Kubo M, Cha PC, Nakamura Y, Levy D, Kimura M, Hwang SJ, Hunt S, Spector T, Soranzo N, Manichaikul AW, Barr RG, Kahali B, Speliotes E, Yerges-Armstrong LM, Cheng CY, Jonas JB, Wong TY, Fogh I, Lin K, Powell JF, Rice K, Relton CL, Martin RM, Davey Smith G. 2017. Association Between Telomere Length and Risk of Cancer and Non-Neoplastic Diseases: A Mendelian Randomization Study. *JAMA Oncol.* 3(5): 636-651.
194. Chen YT, Chen HW, Wu CF, Chu LJ, Chiang WF, Wu CC, Yu JS, Tsai CH, Liang KH, **Chang YS**, Wu M, Ou Yang WT. 2017. Development of a Multiplexed Liquid Chromatography Multiple-Reaction-Monitoring Mass Spectrometry (LC-MRM/MS) Method for Evaluation of Salivary Proteins as Oral Cancer Biomarkers. *Mol Cell Proteomics.* 2017 May;16(5):799-811.
195. Chuang WY, Chang H, Chang GJ, Wang TH, **Chang YS**, Wang TH, Yeh CJ, Ueng SH, Chien HP, Chang CY, Wan YL, Hsueh C. 2017. Pleomorphic mantle cell lymphoma morphologically mimicking diffuse large B cell lymphoma: common cyclin D1 negativity and a simple immunohistochemical algorithm to avoid the diagnostic pitfall. *Histopathology.* 2017 May;70(6):986-999.
196. Chen YT, Chen HW, Wu CF, Chu LJ, Chiang WF, Wu CC, Yu JS, Tsai CH, Liang KH, **Chang YS**, Wu M, Ou Yang WT. Development of a Multiplexed Liquid Chromatography Multiple-Reaction-Monitoring Mass Spectrometry (LC-MRM/MS) Method for Evaluation of Salivary Proteins as Oral Cancer Biomarkers. *Mol Cell Proteomics.* 2017 May;16(5):799-811.
197. Hsiao YC, Chi LM, Chien KY, Chiang WF, Chen SF, Chuang YN, Lin SY, Wu CC, Chang YT, Chu LJ, Chen YT, Chia SL, Chien CY, Chang KP, **Chang YS**, Yu JS. Development of a multiplexed assay for oral cancer candidate biomarkers using peptide immunoaffinity enrichment and targeted mass spectrometry. *Mol Cell Proteomics.* 2017 Aug 18. pii: mcp.000147.2017.
198. Chen TW, Lee CC, Liu H, Wu CS, Pickering CR, Huang PJ, Wang J, Chang IY, Yeh YM, Chen CD, Li HP, Luo JD, Tan BC, Chan TEH, Hsueh C, Chu LJ, Chen YT, Zhang B, Yang CY, Wu CC, Hsu CW, See LC, Tang P, Yu JS, Liao WC, Chiang WF, Rodriguez H, Cheng MH, Myers JN, Chang KP, ***Chang YS**. 2017. APOBEC3A is an oral cancer prognostic biomarker in Taiwanese carriers of an APOBEC deletion polymorphism. *Nat Commun.* 8(1):465.

C. Research Support

Ongoing Research Support

1. Investigation of the role of mitochondria in NLRP3 inflammasome formation and activation in nasopharyngeal carcinoma MOST-105-2320-B-182-034-MY3 2016/08/01-2019/07/31
2. Investigating oncogenic role of ASC in oral squamous cell carcinoma: molecular mechanism of cell migration CMRPD1D0101-103 2014/01/01-2017/12/31

Completed Research Support (2013-2017)

1. Connecting alterations in genome ,proteome and metabolomics to explore OSCC pathogenesis and translational medicine potential MOST (103/104/105)-2632-B-182-001 2014/08/01-2017/07/31
2. Investigating the AIM2 Inflammasome Activation in Nasopharyngeal Carcinoma. NSC 101-2320-B-182-010-MY3 2012/08/01-2016/07/31
3. Development of a miRNAome–based pipeline for verification of targeted cancer MOST 103-2325-B-182-006 2014/05/01-2015/04/30
4. 以 AOMDSS 誘發大腸癌動物模式評估 Enterococcus Faecalis 對大腸癌預防與改善之效益 (SCRPD1E0051 & SCRPD1E0052) 2015/03/01-2016/02/28