
BIOGRAPHICAL SKETCH

NAME in English Chih-Ching Wu	POSITION TITLE Associate Professor, Department of Medical Biotechnology and Laboratory Science, College of Medicine, Chang Gung University		
NAME in Chinese 吳治慶			
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Graduate Institute of Biomedical Sciences, College of Medicine, Chang Gung University	MSc.	06/1998	Immunology
Graduate Institute of Biomedical Sciences, College of Medicine, Chang Gung University	Ph.D.	12/2004	Biochemistry
Molecular Medicine Research Center, Chang Gung University	Postdoc	01/2005	Proteomics

A. Positions and Honors

Positions and Employment

- 2008-2010 Research Assistant Professor, Molecular Medicine Research Center, Chang Gung University
- 2010-2015 Assistant Professor, Department of Medical Biotechnology and Laboratory Science, College of Medicine, Chang Gung University
- 2015- Associate Professor, Department of Medical Biotechnology and Laboratory Science, College of Medicine, Chang Gung University

Other Experience and Professional Memberships

Editor & Refereeing

Honors

- 2016 長庚大學教學獎優良教師
- 2009 HUPO Young Investigator Travel Award
- 2009 TPS International Proteomics Conference and 5th AOHUPO MPI Workshop Poster Award
- 2007 AOHUPO/KSMS Young Scientist Award
- 2004 Chang Gung University Youth Award

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

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

1. Kuo IC, Kao HK, Huang Y, Wang CI, Yi JS, Liang Y, Liao CT, Yen TC, **Wu CC**[#], Chang KP[#]. Endoplasmic reticulum aminopeptidase 2 involvement in metastasis of oral cavity squamous cell carcinoma discovered by proteome profiling of primary cancer cells. *Oncotarget*. 2017 Jun 27, 8(37), 61698-708. ([#]corresponding author)
2. 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, Myers JN, Chang KP, Chang YS. APOBEC3A is an oral cancer prognostic biomarker in Taiwanese carriers of an APOBEC deletion polymorphism. *Nat Commun*. 2017 Sep 6, 8(1), 465.

3. Huang YC, Hung CF, Lin PY, Lee Y, **Wu CC**, Hsu ST, Chen CC, Chong MY, Lin CH, Wang LJ. Gender differences in susceptibility to schizophrenia: Potential implication of neurosteroids. *Psychoneuroendocrinology*. 2017 Oct, 84, 87-93.
4. Wu KA*, **Wu CC***, Chen CD, Chu CM, Shih LJ, Liu YC, Wang CL, Lin HH, Yang CY. Proteome profiling reveals novel biomarkers to identify complicated parapneumonic effusions. *Sci Rep*. 2017 Jun 22, 7(1), 4026. (*equal contribution)
5. Wang LJ, Lin PY, Lee Y, Huang YC, **Wu CC**, Hsu ST, Chen CC, Chong MY, Lin CH, Hung CF. Increased serum levels of cysteine in patients with schizophrenia: A potential marker of cognitive function preservation. *Schizophr Res*. 2017, in press.
6. 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.
7. Lee SY, Wang LJ, Chang CH, **Wu CC**, Chen HL, Lin SH, Chu CL, Lu T, Lu RB. Serum DHEA-S concentration correlates with clinical symptoms and neurocognitive function in patients with bipolar II disorder: A case-controlled study. *Prog Neuropsychopharmacol Biol Psychiatry*. 2017 Mar 6, 74, 31-5.
8. 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, Hartwell LH. Saliva protein biomarkers to detect oral squamous cell carcinoma in a high-risk population in Taiwan. *Proc Natl Acad Sci USA*. 2016, 113(41), 11549-54.
9. Huang YC, Lin PY, Lee Y, **Wu CC**, Hsu ST, Hung CF, Chen CC, Chong MY, Lin CH, Wang LJ. β -hydroxybutyrate, pyruvate and metabolic profiles in patients with schizophrenia: A case control study. *Psychoneuroendocrinology*. 2016, 73, 1-8.
10. Chiang CH*, **Wu CC***, Lee LY, Li YC, Liu HP, Hsu CW, Lu YC, Chang JT, Cheng AJ. Proteomics analysis reveals involvement of Krt17 in areca nut-induced oral carcinogenesis. *J Proteome Res*. 2016, 15(9), 2981-97. (*equal contribution)
11. Huang HI#, Chang YY, Lin JY, Kuo RL, Liu HP, Shih SR, **Wu CC#**. Interactome analysis of the EV71 5' untranslated region in differentiated neuronal cells SH-SY5Y and regulatory role of FBP3 in viral replication. *Proteomics*. 2016, 16(17), 2351-62. (#corresponding author)
12. Hsu CH, Hsu CW, Hsueh C, Wang CL, Wu YC, **Wu CC**, Liu CC, Yu JS, Chang YS, Yu CJ. Identification and characterization of potential biomarkers by quantitative tissue proteomics of primary lung adenocarcinoma. *Mol Cell Proteomics*. 2016, 15(7), 2396-410.
13. Kuo RL#, Li ZH, Li LH, Lee KM, Tam EH, Liu HM, Liu HP, Shih SR, **Wu CC#**. Interactome analysis of the NS1 protein encoded by influenza A H1N1 virus reveals a positive regulatory role of host protein PRP19 in viral replication. *J Proteome Res*. 2016, 15(5), 1639-48. (#corresponding author)
14. Lin YM*, **Wu CC***, Chang YC, Wu CH, Ho HL, Hu JW, Chang RC, Wang CT, Ouyang P. Target disruption of ribosomal protein pNO40 accelerates aging and impairs osteogenic differentiation of mesenchymal stem cells. *Biochem Biophys Res Commun*. 2016, 469(4), 903-10. (*equal contribution)
15. Ke WJ, Hsueh YH, Cheng YC, **Wu CC**, Liu ST. Water surface tension modulates the swarming mechanics of *Bacillus subtilis*. *Front Microbiol*. 2015, 6, 1017.
16. **Wu CC**, Chu HW, Hsu CW, Chang KP, Liu HP. Saliva proteome profiling reveals potential salivary biomarkers for detection of oral cavity squamous cell carcinoma. *Proteomics* 2015, 15(19), 3394-404.
17. Chen CL, Chung T, **Wu CC**, Ng KF, Yu JS, Tsai CH, Chang YS, Liang Y, Tsui KH, Chen YT. Comparative tissue proteomics of microdissected specimens reveals novel candidate biomarkers of bladder cancer. *Mol Cell Proteomics* 2015, 14(9), 2466-78.
18. Kuo RL#, Lin YH, Wang RY, Hsu CW, Chiu YT, Huang HI, Kao LT, Yu JS, Shih SR, **Wu CC#**. Proteomics analysis of EV71-infected cells reveals the involvement of host protein NEDD4L in EV71 replication. *J Proteome Res* 2015, 14(4), 1818-30. (#corresponding author)
19. Liu PJ, Chen C, Wang CL, Wu YC, Hsu CW, Lee CW, Huang LH, Yu JS, Chang YS, **Wu CC#**, Yu CJ#. In-depth proteomic analysis of six types of exudative pleural effusions for non-small cell lung cancer biomarker discovery. *Mol Cell Proteomics* 2015, 14(4), 917-32. (#corresponding author)
20. Wang LJ, Huang HY, Huang MP, Liou W, Chang YT, **Wu CC**, Ojcius DM, Chang YS. The microtubule-associated protein EB1 links AIM2 inflammasomes with autophagy-dependent secretion. *J Biol Chem*

2014, 289(42), 29322-33.

21. Wang LJ, **Wu CC**, Lee SY, Tsai YF. Salivary neurosteroid levels and behavioural profiles of children with attention-deficit/hyperactivity disorder during six months of methylphenidate treatment. *J Child Adolesc Psychopharmacol* 2014, 24 (6), 336-40.
22. Hsu CW, Yu JS, Peng PH, Liu SC, Chang YS, Chang KP, **Wu CC**. Secretome profiling of primary cells reveals that THBS2 is a salivary biomarker of oral cavity squamous cell carcinoma. *J Proteome Res* 2014, 13(11), 4796-807.
23. Chen CD, Wang CL, Yu CJ, Chien KY, Chen YT, Chen MC, Chang YS, **Wu CC**[#], Yu JS[#]. Targeted proteomics pipeline reveals potential biomarkers for the diagnosis of metastatic lung cancer in pleural effusion. *J Proteome Res* 2014, 13(6), 2818-29. ([#]corresponding author)
24. **Wu CC**, Chang YT, Chang KP, Liu YL, Liu HP, Lee IL, Yu JS, Chiang WF. Salivary auto-antibodies as noninvasive diagnostic markers of oral cavity squamous cell carcinoma. *Cancer Epidemiol Biomarkers Prev* 2014, 23(8), 1569-78.
25. Yeh YM, Chen CY, Huang PR, Hsu CW, **Wu CC**[#], Wang TC[#]. Proteomic analyses of genes regulated by heterogeneous nuclear ribonucleoproteins A/B in Jurkat cells. *Proteomics* 2014, 14(11), 1357-66. ([#]corresponding author)
26. Chen CC, Liu HP, Chao M, Liang Y, Tsang NM, Huang HY, **Wu CC**, Chang YS. NF- κ B-mediated transcriptional upregulation of TNFAIP2 by the Epstein-Barr virus oncoprotein, LMP1, promotes cell motility in nasopharyngeal carcinoma. *Oncogene* 2014, 33(28), 3648-59.
27. Lin HR*, **Wu CC***[#], Wu YH, Hsu CW, Cheng ML, Chiu DT. Proteome-wide dysregulation by glucose-6-phosphate dehydrogenase (G6PD) reveals a novel protective role for G6PD in aflatoxin B₁-mediated cytotoxicity. *J Proteome Res* 2013, 12(7), 3434-48. (*equal contribution, [#]corresponding author)
28. Chen CL, Lin TS, Tsai CH, **Wu CC**, Chung T, Chien KY, Wu M, Chang YS, Yu JS, Chen YT. Identification of potential bladder cancer markers in urine by abundant-protein depletion coupled with quantitative proteomics. *J Proteomics* 2013, 85, 28-43.
29. Chang KP, **Wu CC**, Fang KH, Tsai CY, Chang YL, Liu SC, Kao HK. Serum levels of chemokine (C-X-C motif) ligand 9 (CXCL9) are associated with tumor progression and treatment outcome in patients with oral cavity squamous cell carcinoma. *Oral Oncol* 2013, 49(8), 802-7.
30. Chang KP, Kao HK, **Wu CC**, Fang KH, Chang YL, Huang YC, Liu SC, Cheng MH. Pretreatment interleukin-6 serum levels are associated with patient survival for oral cavity squamous cell carcinoma. *Otolaryngol Head Neck Surg* 2013, 148(5), 786-91.
31. Chang YF, Yu JS, Chang YT, Su LC, **Wu CC**, Chang YS, Lai CS, Chou C. The utility of a high-throughput scanning biosensor in the detection of the pancreatic cancer marker ULBP2. *Biosens Bioelectron* 2013, 41(1), 232-7.
32. Wang LJ, Hsu CW, Chen CC, Liang Y, Chen LC, Ojcius DM, Tsang NM, Hsueh C, **Wu CC**[#], Chang YS[#]. 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* 2012, 11(11), 1230-44. ([#]corresponding author)
33. Tsai MH, **Wu CC**, Peng PH, Liang Y, Hsiao YC, Chien KY, Chen JT, Lin SJ, Tang RP, Hsieh LL, Yu JS. Identification of secretory gelsolin as a plasma biomarker associated with distant organ metastasis of colorectal cancer. *J Mol Med* 2012, 90(2), 187-200.
34. Liu HP, Chen CC, **Wu CC**, Huang YC, Liu SC, Liang Y, Chang KP, Chang YS. Epstein-Barr Virus-Encoded LMP1 Interacts with FGD4 to Activate Cdc42 and Thereby Promote Migration of Nasopharyngeal Carcinoma Cells. *PLoS Pathog* 2012, 8(5), e1002690.
35. Hsu CC, Lee YC, Yeh SH, Chen CH, **Wu CC**, Wang TY, Chen YN, Hung LY, Liu YW, Chen HK, Hsiao YT, Wang WS, Tsou JH, Tsou YH, Wu MH, Chang WC, Lin DY. 58-kDa microspherule protein (MSP58) is novel Brahma-related gene 1 (BRG1)-associated protein that modulates p53/p21 senescence pathway. *J Biol Chem* 2012, 287(27), 22533-48.
36. 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. Multiplexed quantification of 63 proteins in human urine by multiple reaction monitoring-based mass spectrometry for discovery of potential bladder cancer biomarkers. *J Proteomics* 2012, 75(12), 3529-45.
37. 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. Comparative and targeted proteomic analyses of urinary microparticles

from bladder cancer and hernia patients. J Proteome Res 2012, 11(12), 5611-29.

Book chapters

1. Chen YT, Parker CE, Chen HW, Chen CL, Domanski D, Smith DS, Wu CC, Chung T, Liang KH, Chen MC, Chang YS, Borchers CH, Yu JS. Chapter 10: A Pipeline that Integrates the Discovery and Verification Studies of Urinary Protein Biomarkers Reveals Candidate Markers for Bladder Cancer in Comprehensive Biomarker Discovery and Validation for Clinical Application. Peter Horvatovich, Rainer Bischoff, David E. Thurston (Editors), Royal Society of Chemistry (RSC), 2013.

C. Research Support

Ongoing Research Support

Project name	Funding or commissioning organization	Y/M of project start and end	Work performed within project	Total funding (NTD)
以蛋白質體學策略探討 NSFL1C 分子功能及其在口腔癌轉移之角色(106-2320-B-182-021-)	Ministry of Science and Technology	2017/8/1~2018/7/31	PI	1,380,000
免疫調節因子在肺炎旁肋膜積液進程中的角色與分子功能探析(104-2321-B-182-009-MY3)	Ministry of Science and Technology	2015/8/1~2018/7/31	Co-PI	2,940,000
探討TNFAIP2調控肌動蛋白絲重組之機轉與癌症的關聯(105-2628-B-005-005-MY3)	Ministry of Science and Technology	2016/8/1~2019/7/31	Co-PI	3,460,000
探討粒線體於鼻咽癌NLRP3發炎體形成及活化的角色(105-2320-B-182-034-MY3)	Ministry of Science and Technology	2016/8/1~2019/7/31	Co-PI	5,100,000
運用蛋白質體技術探索精神症狀的生物指標：比較思覺失調症與第一型雙相情緒障礙症(106-2314-B-182-038-MY2)	Ministry of Science and Technology	2017/8/1~2019/7/31	Co-PI	2,700,000
以蛋白質體學探討非小細胞肺癌EGFR細胞轉位相關的細胞蛋白網絡(106-2320-B-255-006-)	Ministry of Science and Technology	2017/8/1~2018/7/31	Co-PI	750,000

Completed Research Support (2012-2017)

Project name	Funding or commissioning organization	Y/M of project start and end	Work performed within project	Total funding (NTD)
建立高通量多重自體抗體標的分析技術平台快	Ministry of Science and	2013/5/1~2014/4/30	PI	2,135,000

速有效驗證癌症體液自體抗體生物標誌 (2/3)(102-2325-B-182-014-)	Technology			
以蛋白質體學策略探討TNFAIP2之分子功能及其與鼻咽癌轉移之關聯(102-2320-B-182-029-MY3)	Ministry of Science and Technology	2013/8/1~2016/7/31	PI	3,660,000
建立高通量多重自體抗體標的分析技術平台快速有效驗證癌症體液自體抗體生物標誌 (3/3)(103-2325-B-182-007-)	Ministry of Science and Technology	2014/5/1~2015/4/30	PI	1,850,000
腸病毒聚合酶上的一段保留帶電性胺基酸序列調控病毒感染及致病力的機制(105-2320-B-182-003-)	Ministry of Science and Technology	2016/8/1~2017/7/31	PI	1,050,000
以蛋白質體學策略探討NSFL1C之分子功能及其與口腔癌轉移之關聯(105-2320-B-182-025-)	Ministry of Science and Technology	2016/8/1~2017/7/31	PI	1,010,000
利用肺組織與肋膜積液定量蛋白質體鑑定與分析和非小細胞肺癌轉移相關的蛋白質標記(101-2320-B-182-035-MY3)	Ministry of Science and Technology	2012/8/1~2015/7/31	Co-PI	5,520,000
以已建立之分泌與組織蛋白質體資料庫為基礎，尋找口腔癌病患體液與組織中有效之偵測與轉移生物標誌(102-2628-B-182A-012-MY3)	Ministry of Science and Technology	2013/8/1~2016/7/31	Co-PI	3,600,000
探討LSD1在人類上皮性卵巢癌所扮演的角色 (102-2628-B-182-016-MY3)	Ministry of Science and Technology	2013/8/1~2016/7/31	Co-PI	4,620,000
連結基因體、蛋白質體、代謝體之分子改變探討口腔癌致病機轉與轉譯醫學應用(1/3)(103-2632-B-182-001-)	Ministry of Science and Technology	2014/8/1~2015/7/31	Co-PI	7,000,000
連結基因體、蛋白質體、代謝體之分子改變探討口腔癌致病機轉與轉譯醫學應用(2/3)(104-2632-B-182-001-)	Ministry of Science and Technology	2015/8/1~2016/10/31	Co-PI	7,000,000
橘黴素對小鼠胚胎發育的傷害效應(104-2311-B-033-002-)	Ministry of Science and Technology	2015/8/1~2016/10/31	Co-PI	1,150,000
探討focal adhesion kinase (FAK) 調控發炎體之機轉(104-2320-B-715-007-)	Ministry of Science and Technology	2015/8/1~2016/7/31	Co-PI	914,000
辨識老年憂鬱合併自殺意念患者之血液生物標誌和空間行為特徵(104-2314-B-075-039-)	Ministry of Science and Technology	2015/8/1~2016/7/31	Co-PI	750,000

連結基因體、蛋白質體、代謝體之分子改變探討口腔癌致病機轉與轉譯醫學應用(3/3)(105-2632-B-182-001-)	Ministry of Science and Technology	2016/8/1~ 2017/7/31	Co-PI	7,000,000
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