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經歷

中國醫藥大學醫學系微生物學科 教授 (2009/02~至今)

中國醫藥大學醫學系微生物學科副教授 (2002/08~2009/01)

中國醫藥大學醫學系微生物學科 助理教授 (1997/08~2001/07)

學歷

國立中興大學獸醫學研究所獸醫學博士 (1992~1997)

國立中興大學獸醫學系獸醫學士 (1987~1992)

研究專長及方向

- 微生物及免疫學、系統生物學、功能性基因體學
- 利用系統生物學及活體影像等工具，探究中草藥對動物體之抗發炎、調節免疫等作用及機轉
- 應用新穎功能性基因體學平台進行中草藥抗微生物之研究
- 疫苗及佐劑生物製劑開發及研究

著作 (可至學術研究管理系統查詢更新的著作)

(A) 期刊論文

1. Chen, J.C., Ho, T.Y., Chang, Y.S., Wu, S.L., and Hsiang, C.Y.* 2006. Anti-diarrheal effect of *Galla Chinensis* on the *Escherichia coli* heat-labile enterotoxin and ganglioside interaction. *J. Ethnopharmacol.* 103(3): 385-391. (SCI)
2. Ho, T.Y., Wu, S.L., Chen, J.C., Wei, Y.C., Cheng, S.E., Chang, Y.H., Liu, H.J., and Hsiang, C.Y.* 2006. Design and biological activities of novel inhibitory peptides for SARS-CoV spike protein and angiotensin-converting enzyme 2 interaction. *Antiviral Res.* 69(2): 70-76. (SCI)
3. Hsieh, C.L., Lin, J.J., Chiang, S.Y., Su, S.U., Tang, N.Y., Lin, G.G., Lin, I.H., Liu, C.H., Hsiang, C.Y., Chen, J.C., and Ho, T.Y.* 2007. *Gastrodia elata* modulated

activator protein 1 via c-Jun N-terminal kinase signaling pathway in kainic acid-induced epilepsy in rats. *J. Ethnopharmacol.* 109(2): 241-247. (SCI).

4. Ho, T.Y., Wu, S.L., Chen, J.C., Li, C.C., and Hsiang, C.Y.* 2007. Emodin blocks the SARS coronavirus spike protein and angiotensin-converting enzyme 2 interaction. *Antiviral Res.* 74(2): 92-101. (SCI)
5. Hsiang, C.Y., Wu, S.L., Chen, J.C., Lo, H.Y., Li, C.C., Chiang, S.Y., Wu, H.C., and Ho, T.Y.* 2007. Acetaldehyde induces matrix metalloproteinase-9 gene expression via nuclear factor- κ B and activator protein 1 signaling pathways in human hepatocellular carcinoma cells: association with the invasive potential. *Toxicol. Lett.* 171 (1-2): 78-86. (SCI)
6. Ho, T.Y., Chen, Y.S., and Hsiang, C.Y.* 2007. Noninvasive nuclear factor- κ B bioluminescence imaging for the assessment of host-biomaterial interaction in transgenic mice. *Biomaterials* 28 (30): 4370-4377. (SCI)
7. Chen, J.C., Chang, Y.S., Wu, S.L., Chao, D.C., Chang, C.S., Li, C.C., Ho, T.Y.*, and Hsiang, C.Y.* 2007. Inhibition of *Escherichia coli* heat-labile enterotoxin-induced diarrhea by *Chaenomeles speciosa*. *J. Ethnopharmacol.* 113 (2): 233-239. (SCI)
8. Lee, C.H.¹, Chen, J.C.¹, Hsiang, C.Y., Wu, S.L., Wu, H.C., and Ho, T.Y.* 2007. Berberine suppresses inflammatory agents-induced interleukin-1 β and tumor necrosis factor- α productions via the inhibition of I κ B degradation in human lung cells. *Pharmacol. Res.* 56(3): 193-201. (¹ equal contribution) (SCI)
9. Chen, J.C., Huang, L.J., Wu, S.L., Kuo, S.C., Ho, T.Y.*, and Hsiang, C.Y.* 2007. Ginger and its bioactive component inhibit enterotoxigenic *Escherichia coli* heat-labile enterotoxin-induced diarrhea in mice. *J. Agric. Food Chem.* 55(21): 8390-8397. (SCI)
10. Cheng, W.Y.¹, Hsiang, C.Y.¹, Bau, D.T., Chen, J.C., Shen, W.S., Li, C.C., Lo, H.Y., Wu, S.L., Chiang, S.Y., and Ho, T.Y.* 2007. Microarray analysis of vanillin-regulated gene expression profile in human hepatocarcinoma cells. *Pharmacol. Res.* 56(6): 474-482. (¹ equal contribution) (SCI)
11. Cheng, H.M., Hsiang, C.Y., Chen, G.W., Wu, S.L., Chen, J.C., Huang, C.Y., Bau, D.T.*, and Ho, T.Y.* 2008. Inhibition of lipopolysaccharide-induced interleukin-1 β and tumor necrosis factor- α production by menthone through nuclear factor- κ B signaling pathway in HaCat cells. *Chin. J. Physiol.* 51(3): 160-166. (SCI)
12. Chen, C.C., Hsiang, C.Y., Chiang, A.N., Lo, H.Y., and Li, C.I. 2008. Peroxisome proliferator-activated receptor gamma transactivation-mediated potentiation of glucose uptake by Bai-Hu-Tang. *J. Ethnopharmacol.* 118(1): 46-50. (SCI)
13. Cheng, W.Y.¹, Wu, S.L.¹, Hsiang, C.Y., Li, C.C., Lai, T.Y., Lo, H.Y., Shen, W.S., Lee, C.H., Chen, J.C., Wu, H.C., and Ho, T.Y.* 2008. Relationship between San-Huang-Xie-Xin-Tang and its herbal components on the gene expression profiles in HepG2 cells. *Am. J. Chin. Med.* 36(4): 783-797. (¹ equal contribution) (SCI)

14. Hsiang, C.Y., and Ho, T.Y.* 2008. Emodin is a novel alkaline nuclease inhibitor that suppresses herpes simplex virus type 1 yields in cell cultures. *Brit. J. Pharmacol.* 155(2): 227-235. (SCI)
15. Wu, S.L., Ho, T.Y., Liang, J.A., and Hsiang, C.Y.* 2008. Histidine residue at position 226 is critical for iodide uptake activity of human sodium/iodide symporter. *J. Endocrinol.* 199(2): 213-219.(SCI)
16. Lee, C.H., Wu, S.L., Chen, J.C., Li, C.C., Lo, H.Y., Cheng, W.Y., Lin, J.G., Chang, Y.H., Hsiang, C.Y.*, and Ho, T.Y.* 2008. *Eriobotrya japonica* leaf and its triterpenes inhibited lipopolysaccharide-induced cytokines and inducible enzymes productions via the nuclear factor- κ B signaling pathway in lung epithelial cells. *Am. J. Chin. Med.* 36(6): 1185-1198. (SCI)
17. Liang, J.A., Wu, S.L., Lo, H.Y., Hsiang, C.Y.*, and Ho, T.Y.* 2009. Vanillin inhibits matrix metalloproteinase-9 expression through down-regulation of nuclear factor- κ B signaling pathway in human hepatocellular carcinoma cells. *Mol. Pharmacol.* 75(1): 151-157. (SCI)
18. Chen, J.C.¹, Ho, T.Y.¹, Chang, Y.S., Wu, S.L., Li, C.C., and Hsiang, C.Y.* 2009. Identification of *Escherichia coli* enterotoxin inhibitors from traditional medicinal herbs by *in silico*, *in vitro*, and *in vivo* analyses. *J. Ethnopharmacol.* 121(3): 372-378. (¹equal contribution) (SCI)
19. Wu, S.L., Li, C.C., Chen, J.C., Chen, Y.J., Lin, C.T., Ho, T.Y.*, and Hsiang, C.Y.* 2009. Mutagenesis identifies the critical amino acid residues of human endonuclease G involved in catalysis, magnesium coordination, and substrate specificity. *J. Biomed. Sci.* 16: 6. (SCI)
20. Wu, S.L., Li, C.C., Ho, T.Y.*, and Hsiang, C.Y.* 2009. Mutagenesis identifies the critical regions and amino acid residues of suid herpesvirus 1 DNA-binding protein required for DNA binding and strand invasion. *Virus Res.* 140 (1-2): 147-154. (SCI)
21. Chang, T.J., Chang, Y.J., Ho, T.Y., Hsiang, C.Y., Yu, C.Y., Lee, T.W., Lin, W.J., and Chang, C.H.* 2009. Noninvasive bioluminescent and microPET imaging for the regulation of NF- κ B in human hepatoma-bearing mice. *Anticancer Res.* 29: 987-994. (SCI)
22. Su, S.Y., Hsieh, C.L., Wu, S.L., Cheng, W.Y., Li, C.C., Lo, H.Y., Ho, T.Y.*, and Hsiang, C.Y.* 2009. Transcriptomic analysis of EGb 761-regulated neuroactive receptor pathway *in vivo*. *J. Ethnopharmacol.* 123 (1): 68-73. (SCI)
23. Hsiang, C.Y., Chen, Y.S., and Ho, T.Y.* 2009. Nuclear factor- κ B bioluminescence imaging-guided transcriptomic analysis for the assessment of hoist-biomaterial interaction *in vivo*. *Biomaterials* 30 (17): 3042-3049. (SCI)
24. Cheng, W.Y.¹, Lien, J.C.¹, Hsiang, C.Y., Wu, S.L., Li, C.C., Lo, H.Y., Chen, J.C., Chiang, S.Y., Liang, J.A., and Ho, T.Y.* 2009. Comprehensive evaluation of a novel nuclear factor- κ B inhibitor, quinoclamine, by transcriptomic analysis. *Brit. J. Pharmacol.* 157(5): 746-756. (¹ equal contribution) (SCI)
25. Wu, S. L., Chen, J.C., Li, C.C., Lo, H.Y., Ho, T.Y.*, and Hsiang, C.Y.* 2009.

Vanillin improves and prevents trinitrobenzene sulfonic acid-induced colitis in mice. *J. Pharmacol. Exp. Ther.* 330 (2): 370-376. (SCI)

26. Chen, Y.Y., Chiang, S.Y., Wu, H.C., Kao, S.T., Hsiang, C.Y.*, Ho, T.Y.*, and Lin, J.G.* 2010. Microarray analysis reveals the inhibition of nuclear factor-kappa B signaling by aristolochic acid in normal human kidney (HK-2) cells. *Acta Pharmacol. Sin.* 31(2): 227-236. (SCI)
27. Chen, Y.Y., Chung, C.J., Wu, H.C., Bau, D.T., Wu, K.Y., Kao, S.T., Hsiang, C.Y.*, Ho, T.Y.*, and Chiang, S.Y.* 2010. Aristolochic acid suppresses DNA repair and triggers oxidative DNA damage in human kidney proximal tubular cells. *Oncol. Rep.*, in press. (SCI)

(B) 研討會論文

1. Chang, Y.H., Hsiao, N.Y., Hsu, L.L., Ho, T.Y., Wu, S.L., and Hsiang, C.Y.* 2006. Acetaldehyde induces matrix metalloproteinase-9 gene expression via the activation of I κ B and JNK/ β -TrCP signaling pathways in HepG2 cells: association with the invasive potential. Fourteenth Symposium on Recent Advances in Cellular and Molecular Biology, Pintung. (2006/1/18~2006/1/20)
2. Li, C.C., Chen, Y.J., Chiang Hsiang, P.Y., Chan, K.M., Ho, T.Y., Wu, S.L.*, and Hsiang, C.Y. 2006. Involvement of conserved histidine-141 and asparagne-251 residues of human endonuclease G in magnesium binding and enzyme activity. Fourteenth Symposium on Recent Advances in Cellular and Molecular Biology, Pintung. (2006/1/18~2006/1/20)
3. 李昌誠、葉家舟、張永賢、林昭庚、侯庭鏞*、項千芸。2006。小藥鹼及其結構類似物抑制肺部細胞發炎反應之探討。2006 第九屆工程科技與中西醫學應用研討會。台中市。(2006/5/28)
4. 傅書琴、吳思瑤、張藝馨、吳世祿、項千芸*、侯庭鏞。2006。香草醛預防及治療發炎性大腸症之研究。2006 第九屆工程科技與中西醫學應用研討會。台中市。(2006/5/28)
5. Wu, S.Y., Lin, Y.C., Chen, J.C., Hsiang, C.Y., and Ho, T.Y.* 2006. Antifatigue effect and proteomics-based constituent analysis of deer antler. The Spring Symposium of the Taiwan Association of Veterinary Medicine and Animal Husbandry, Chiayi. (2006/5/13)
6. Chang, C.M., Chu, H.T., Lee, C.C., Lo, H.Y., Chen, J.C., Hsiang, C.Y., Chang, Y.H., and Ho, T.Y.* 2006. HerbBlast: A program for similarity and ontology analysis of Chinese herbal medicine. Bioinformatics in Taiwan 2006, Taichung. (2006/9/13~2006/9/14)
7. 陳兆群、侯庭鏞、吳世祿、張永勳、趙德澂、蔡宇曾、羅義凱、張宏祺、項千芸*。2006。木瓜影響大腸桿菌腸毒素與受體結合及其抗下痢作用機轉探討。九十四年度委辦研究計畫成果發表會暨第二十一屆天然藥物研討會，台中市。(2006/11/18~2006/11/19)
8. 李昌誠、葉家舟、陳兆群、高尚德、張永賢、林昭庚、侯庭鏞*、項千芸。2007。

枇杷葉及其主要成分物抑制肺部細胞發炎反應之探討。中華民國第六屆第三次會員大會暨學術研討會，台中市。(2007/3/11)

9. Chen, Y.J., Wu, S.L., Li, C.C., Fu, Y.J., Fu, S.C., Ong, W.K., Ho, T.Y., and Hsiang, C.Y.* 2007. Roles of conserved charged amino acid residues of herpes simplex virus type 1 UL-12 in nuclease activities and DNA-binding abilities. The 22th Joint Annual Conference of Biomedical Sciences, Taipei. (2007/3/17~2007/3/18)
10. Chang, W.I., Ho, T.Y., Hsiang, C.Y., Wu, S.L.* , Kao C.H., Chen, C.P., and Lin, C.H. 2007. Extracellular conservative charged amino acid residues on the sodium iodide symporter responding for iodine uptake. The 22th Joint Annual Conference of Biomedical Sciences, Taipei. (2007/3/17~2007/3/18)
11. Chen, C.C.* , Ho, T.Y., Chiang, A.N., Lo, H.Y., and Hsiang, C.Y. 2007. Bai-Hu-Tang (白虎湯) potentiated insulin-stimulated glucose uptake synergistically in 3T3-L1 adipocyte via PPAR γ activity. The 28th Annual Meeting of the Endocrine Society and the Diabetes Association of the ROC, Taipei. (2007/3/17~2007/3/18)
12. 羅益凱、陳兆群、張永勳、侯庭鏞、項千芸。2007。搜尋 308 種中藥對氨基配醣類抗生素抗藥性大腸桿菌的相關活性研究。2007 年第十屆工程科技與中西醫藥應用研討會。台中市。(2007/5/27)
13. Lo, H.Y., Hsiang, C.Y., Au, L.Y., Lin, P.Y., Wu, S.L., and Ho, T.Y. 2007. Vanillin suppresses cell invasion through inhibiting matrix metalloproteinase-9 gene expression in HepG2 cells. The 1st International Cancer Symposium, Taichung. (2007/11/16~2007/11/17)
14. Chen J.C., Lin, P.Y., Li, C.C., Chao, D.C., Chang, Y.S., Wu, S.L., Hsiang, C.Y., and Ho, T.Y. 2007. Search and identify anti-diarrheal phytochemicals from traditional Chinese medicines by molecular biology and bioinformatics tools. The 14th International Congress of Oriental Medicine, Taipei. (2007/12/2~2007/12/3)
15. Cheng, W.Y., Lai, T.Y., Shen, W.S., Bau, D.T., Chen, J.C., Lo, H.Y., Wu, S.L., Chiang, S.Y., Hsiang, C.Y., and Ho, T.Y. 2007. Microarray analysis of vanillin-regulated gene expression profile in human hepatocarcinoma cells. The 14th International Congress of Oriental Medicine, Taipei. (2007/12/2~2007/12/3)
16. Lo, H.Y., Li, C.C., Wu, S.L., Hsiang, C.Y., Kao, C.H., and Ho, T.Y. 2008. Establishment of the noninvasive nuclear factor- κ B bioluminescence imaging and its application on the anti-inflammatory drug development. Sixteenth Symposium on Recent Advances in Cellular and Molecular Biology, Pingtung. (2008/1/23~2008/1/25)
17. Wu, S.L., Hsiang, C.Y., Bau, D.T., and Ho, T.Y. 2008. Research and development of Chinese medicinal herbs for anti-liver diseases by the genomic-based platform. Symposium of the National Research Program for Genomic Medicine, Taipei. (2008/03/02~2008/3/3)
18. Hsu, M.F., Wu, S.L., Hsiang, C.Y., Ho, T.Y., Li, C.C., Chen, J.C. 2008. 以大腸桿菌忌熱性腸毒素為標的開發中草藥抗下痢之高速篩選平台。2008 研究學習群期末成果發表會，台中市。(2008/06/06)

19. Au, L.Y., Chen, J.C., Lo, H.Y., Li, C.C., Cheng, W.Y., Shen, W.S., Wu, S.L., Hsiang, C.Y., and Ho, T.Y. 2008. Novel PPAR- γ agonist identified from a phytochemical library of traditional Chinese medicine by docking analysis. 2008 研究學習群期末成果發表會, 台中市. (2008/06/06)
20. 項千芸、侯庭鏞、陳兆群、羅欣宜、吳世祿。2008。苦瓜蛋白調整血糖機制及其應用之研究。苦瓜產業與保健功效研討會, 花蓮市。(2008/06/12)
21. Au, L.Y., Chen, J.C., Lo, H.Y., Li, C.C., Cheng, W.Y., Shen, W.S., Wu, S.L., Hsiang, C.Y., and Ho, T.Y. 2008. Novel PPAR- γ agonist identified from a phytochemical library of traditional Chinese medicine by docking analysis. 2008 工程科技與中西醫藥應用研討會, 台中市. (2008/06/15)
22. 項千芸。2008。活體即時性炎症反應報導系統於抗發炎藥物的研發。九十七年度生物科技研發成果聯合發表會。台北市。(2008/10/30)。
23. Liang, J.A., Fu, S.C., Lo, H.Y., Hsiang, C.Y., Wu, S.L., and Ho, T.Y. 2009. Nuclear factor- κ B bioluminescence imaging-guided transcriptomic analysis for the assessment of host-ionizing radiation interaction *in vivo*. The 58th Annual Meeting of the Radiological Society of the Republic of China. Taichung. (2009/03/28~03/29)
24. 項千芸。2009。新穎調降血糖蛋白。學研研發成果交流平台會。台北市。(2009/04/30)
25. Hsiang, C.Y., Ho, T.Y., Chen, G.W., and Wu, S.L. 2010. Study on the immunomodulation of Chinese medicinal herbs by functional genomic platform approaches. Symposium of the National Research Program for Genomic Medicine. Taipei. (2010/03/14~2010/03/15)

(C) 專書及專書論文

1. 方世華, 吳禮宇, 李珍珍、洪千惠、項千芸, 劉昭君, 賴志河、鍾景光。微生物學實驗, 第四版, 新文京開發出版股份有限公司。2008。
2. Chen, J.C., Hsiang, C.Y., Li, C.C., Chang, Y.S., Tsia, F.J., and Ho, T.Y.* 2008. Anti-bacterial potential of natural products. In: F.J. Tsai and H.J. Lin (eds), New Applications of Old Traditional Herbs. Research Signpost, Kerala, India, pp. 105-120.
3. 李龍緣、林應如、洪千惠、許晉詮、張芸潔、張弘志、萬磊、湯智昕、楊舒如、賴怡琪、賴志河、林振文、徐媛曼、項千芸、王雯靜、方世華。2008。醫護微生物及免疫學, 第三版。新文京開發出版股份有限公司。
4. 李龍緣、林應如、許晉詮、萬磊、徐媛曼、洪千惠、湯智昕、賴怡琪、賴志河、方世華、林振文、項千芸、廖健森、王雯靜、吳錫金、侯庭鏞、藍忠昱。2008。生物資訊, 第二版。九州圖書文物有限公司。

(D) 技術報告及其它

1. 陳兆群、項千芸、侯庭鏞。2007。中草藥抗菌在乳業之應用。酪農天地雜誌。81: 36-39。

近三年研究計畫

計畫名稱	主持或共同主持	研究經費	執行期間	委託單位
利用功能性基因體學平台為基礎進行中藥免疫調控之研究	主持	6,819,018	97/05/01~100/04/30	衛生署中醫藥委員會 (基因體醫學國家型科技計畫)
以新穎活性分析平台研究抗腸毒素性大腸桿菌下痢之中草藥及其活性成分	主持	1,550,000	98/08/01~100/07/31	國科會
以具調控血糖功效之瓜科蛋白質為導引進行調整代謝產品的開發	主持	1,000,000	98/08/01~100/07/31	國科會
應用 nuclear factor- κ B 活體分子影像進行抗發炎中草藥之研究	共同主持	3,363,000	97/08/01~100/07/31	國科會
以 NF- κ B 活性為核心之全身性與系統性基因表現圖譜應用於中醫肝病方藥之研究	共同主持	876,000	96/08/01~97/07/31	國科會
以基因體研究平台為基礎進行防治肝病相關中藥之研究	共同主持	3,800,000	96/05/01~98/4/30	衛生署中醫藥委員會 (基因體醫學國家型科技計畫)
苦瓜蛋白調整血糖機制及其應用之研究 (1/2) (2/2)	主持	3,770,000	96/01/01~97/12/31	國科會(農業生物技術國家型科技計畫)
以泡疹病毒去氧核醣核酸分解酶作為新穎標的進行中草藥抗病毒的研究	主持	400,000	95/08/01~96/07/31	中國醫藥大學
豬泡疹病毒一型基因重組複合體交互機轉及其應用之研究	主持	1,253,000	95/08/01~96/07/31	國科會