

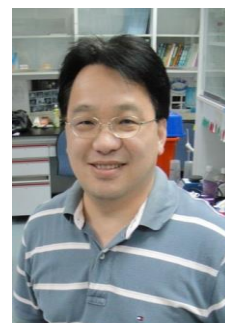
蔡宗杰 助理教授

Tzung-Chieh Tsai, Ph. D.

Phone: +886-5-2717835

Room: A32-620 (office); A32-608 (lab.)

E-mail: tsaitc@mail.ncyu.edu.tw



Education (學歷)

- 1990 ~1993, B.S. School of Medical Technology
Taipei Medical College, Taipei, Taiwan
(台北醫學院 醫技系)
- 1994 ~1996, M.S. Department of Microbiology & Immunology
National Defense Medical Center, Taipei, Taiwan
(國防醫學院 微生物及免疫學研究所)
- 2001 ~ 2005, Ph.D. Graduate Institute of Life Sciences
National Defense Medical Center, Taipei, Taiwan
(國防醫學院 生命科學研究所)

Professional Experience (經歷)

- 1996 ~ 2001 Technologist
Department of Medical Research & Education
Veteran's general Hospital, Taipei, Taiwan
(台北榮民總醫院 教學研究部 技術員)
- 2006/2 ~ 2007/1 Assistant Professor
Department Biotechnology & Bioinformatics
Asia University, WuFeng, Taichung, Taiwan
(亞洲大學 生物科技與生物資訊學系 助理教授)
- 2007/2 ~ 2010/7 Assistant Professor
Department Microbiology & Immunology
National Chiayi University, Chiayi, Taiwan
(國立嘉義大學 微生物與免疫學系暨研究所 助理教授)
- 2010/8 ~ Present Assistant Professor
Department Microbiology, Immunology and Biopharmaceuticals
National Chiayi University, Chiayi, Taiwan
(國立嘉義大學 微生物免疫與生物藥學系暨研究所 助理教授)

Professional License (專業證照) :

- Medical Radiation Technologist in Taiwan (台灣醫事放射師)
- Medical Technologist in Taiwan (台灣醫事檢驗師)

Research Field (研究領域)

- Cancer Biology (癌症生物學)
- Protein-Protein Interaction (蛋白質間的交互作用)
- Gene Transcription Control (基因轉錄調控)
- Molecular Virology (分子病毒學)
- Characterization of gene function by RNA interference (RNAi)
(利用干擾性核糖核酸技術鑑定基因功能)

Teaching Courses (授課科目)

Microbiology (微生物學)、Laboratory of Microbiology (微生物學實驗)、Advanced Microbiology (微生物學特論)、Vaccine Technology (疫苗技術)、Virology (病毒學)、Advanced Tumor Virology (腫瘤病毒學特論)、Disease and Virus (疾病與病毒)、Applications of RNA Interference in Biomedical Research (核糖核酸干擾在生物醫學中的應用)、Tumor Biology (腫瘤生物學)

Research Grant (研究計畫)

計畫名稱	計畫內擔任的工作	起訖年月	補助或委託機構	執行情形	經費總額
運用敏感性干擾性核糖核酸技術找尋鑑定引發口腔癌的新穎生物指標蛋白分子 (CMU 95-122)	協同主持人	2006/8/1 至 2007/7/31	中國醫藥大學 院內整合型計畫	已結案	400,000
以蛋白質體學技術探討EB病毒核抗原抑制神經膠原致癌基因的分機轉 (NSC 95-2321-B-415-003)	主持人	2006/9/1 至 2007/7/31	行政院國家科學委員會	已結案	1,290,000
研究 PPAR-gamma 與其配體在過度表現第二型人類表皮生長因子受體之癌細胞中的角色 (NSC 96-2320-B-415-004)	主持人	2007/8/1 至 2008/7/31	行政院國家科學委員會	已結案	920,000
探討EB病毒核抗原衍生蛋白抑制神經膠原致癌基因表現的機轉 (NSC 99 - 2311 - B - 415 - 002 -)	主持人	2010/8/1 至 2011/7/31	行政院國家科學委員會	已結案	900,000

探討中草藥藤紫丹萃取物對人體周邊血液細胞免疫的調控 (TCRD-TPE-103-37)	共同主持人	2014/1/1 至 2014/12/31	佛教慈濟綜合醫院台北分院 院內醫療科技 研究計劃	已結案	300,000
探討機械力調控 牙周病菌感染對 血管細胞及動脈 硬化發生的影響 及分子機轉 (1042314-B-415-003-)	共同主持人	2015/08/01 至 2016/07/31	科技部	已結案	1,000,000
闡明牙周病菌感染誘導血管平滑 肌細胞產生鈣化 現象之影響並探 討機械力對此過 程之作用機制 (105-2314-B-415001-)	共同主持人	2016/08/01 至 2017/07/31	科技部	執行中	850,000
探討脂肪激素誘 導大腸癌細胞表 現 SREBP-1c 蛋白 與抗 藥性及細胞 生長之相關性 (105-2314-B182A-132-)	共同主持人	2016/08/01 至 2017/07/31	科技部	執行中	803,000

Publications (論文著作)

1. Tsao, Y. P., S. W. Kuo, S. F. Li, **T. C. Tsai**, L. Y. Li, and S. L. Chen. 1995. Human papillomavirus 11 E5a delays the growth restriction induced by temperature shift in temperature-sensitive simian virus 40 T antigen-immortalized keratinocytes. *Biochem.Biophys.Res.Commun.* **217**:712-720. (1995/12/26)(SCI) IF:2.371
2. Chen, S. L., C. H. Huang, **T. C. Tsai**, K. Y. Lu, and Y. P. Tsao. 1996. The regulation mechanism of c-jun and junB by human papillomavirus type 16 E5 oncoprotein. *Arch.Virol.* **141**:791-800. (1996)(SCI) IF:2.255
3. Chen, S. L., **T. C. Tsai**, C. P. Han, and Y. P. Tsao. 1996. Mutational analysis of human papillomavirus type 11 E5a oncoprotein. *J.Virol.* **70**:3502-3508. (1996/6)(SCI) IF:4.606
4. Tsao, Y. P., L. Y. Li, **T. C. Tsai**, and S. L. Chen. 1996. Human papillomavirus type 11 and 16 E5 represses p21(Waf1/Sdi1/Cip1) gene expression in fibroblasts and keratinocytes. *J.Virol.* **70**:7535-7539. (1996/11)(SCI) IF:4.606
5. Chen, S. L., Y. K. Lin, L. Y. Li, Y. P. Tsao, H. Y. Lo, W. B. Wang, and **T. C. Tsai**. 1996. E5 proteins of human papillomavirus types 11 and 16 transactivate the

- c-fos promoter through the NF1 binding element. *J.Virol.* **70**:8558-8563. (1996/12)(SCI) IF:4.606
6. Chang, T. J., **T. C. Tsai**, Y. L. Wu, H. M. Yang, C. W. Chi, A. H. Yang, and C. H. Lee. 1998. Abnormal transcripts of FHIT gene in thyroid cancer. *Oncol.Rep.* **5**:245-247. (1998/1)(SCI) IF:2.486
 7. **Tsai, T. C.**, H. M. Yang, Y. L. Wu, C. W. Chi, M. D. Chou, L. S. Lee, and T. J. Chang. 1999. Abnormal transcripts of FHIT gene in Chinese brain tumors. *Oncol.Rep.* **6**:345-348. (1999/3)(SCI) IF:2.486
 8. Lai, C. C., W. C. Wu, S. L. Chen, X. Xiao, **T. C. Tsai**, S. J. Huan, T. L. Chen, R. J. Tsai, and Y. P. Tsao. 2001. Suppression of choroidal neovascularization by adeno-associated virus vector expressing angiostatin. *Invest Ophthalmol.Vis.Sci.* **42**:2401-2407. (2001/9)(SCI) IF:3.427
 9. **Tsai, T. C.** and S. L. Chen. 2003. The biochemical and biological functions of human papillomavirus type 16 E5 protein. *Arch.Virol.* **148**:1445-1453. (2003/8)(SCI) IF:2.255
 10. **Tsai, T. C.**, Y. L. Lee, W. C. Hsiao, Y. P. Tsao, and S. L. Chen. 2005. NRIP, a novel nuclear receptor interaction protein, enhances the transcriptional activity of nuclear receptors. *J.Biol.Chem.* **280**:20000-20009. (2005/5/20)(SCI) IF:4.258
 11. Chen, S. L., S. T. Lin, **T. C. Tsai**, W. C. Hsiao, and Y. P. Tsao. 2007. ErbB4 (JM-b/CYT-1)-induced expression and phosphorylation of c-Jun is abrogated by human papillomavirus type 16 E5 protein. *Oncogene* **26**:42-53. (2007/1/4)(SCI) IF:7.932
 12. Liu, J. Y., T. C. Chuang, T. D. Way, **T. C. Tsai**, C. L. Hu, G. Y. Liu, S. S. Wang, J. G. Chung, and M. C. Kao. 2009. The N-terminal domain of EBNA1 acts as a suppressor of the HER2/neu oncogene. *Cancer Lett.* **273**:273-280. (2009/1/18)(SCI) IF:5.992
 13. Tsai, K. W., H. T. Lai, **T. C. Tsai**, Y. C. Wu, Y. T. Yang, K. Y. Chen, C. M. Chen, Y. S. Li, and C. N. Chen. 2009. Difference in the regulation of IL-8 expression induced by uropathogenic E. coli between two kinds of urinary tract epithelial cells. *J.Biomed.Sci.* **16**:91. (2009/10/3)(SCI) IF:2.935
 14. Kuo, P. C., Y. P. Tsao, H. W. Chang, P. H. Chen, C. W. Huang, S. T. Lin, Y. T. Weng, **T. C. Tsai**, S. Y. Shieh, and S. L. Chen. 2009. Breast cancer amplified

- sequence 2, a novel negative regulator of the p53 tumor suppressor. *Cancer Res.* **69**:8877-8885. (2009/12/1)(SCI) IF:8.556
15. Chiang, J. K., M. L. Sung, H. R. Yu, H. I. Chang, H. C. Kuo, **T. C. Tsai**, C. K. Yen, and C. N. Chen. 2011. Homocysteine induces smooth muscle cell proliferation through differential regulation of cyclins A and D1 expression. *J.Cell Physiol* **226**:1017-1026. (2011/4)(SCI) IF:4.155
 16. Chen, M. L., **T. C. Tsai**, Y. Y. Lin, Y. M. Tsai, L. K. Wang, M. C. Lee, and F. M. Tsai. 2011. Antipsychotic drugs suppress the AKT/NF-kappaB pathway and regulate the differentiation of T-cell subsets. *Immunol.Lett.* **140**:81-91. (2011/10/30)(SCI) IF:2.483
 17. Yeh, M. H., **T. C. Tsai**, H. P. Kuo, N. W. Chang, M. R. Lee, J. G. Chung, M. H. Tsai, J. Y. Liu, and M. C. Kao. 2011. Lentiviral short hairpin RNA screen of human kinases and phosphatases to identify potential biomarkers in oral squamous cancer cells. *Int.J.Oncol.* **39**:1221-1231. (2011/11)(SCI) IF:3.018
 18. Chen, M. L., **T. C. Tsai**, L. K. Wang, Y. Y. Lin, Y. M. Tsai, M. C. Lee, and F. M. Tsai. 2012. Risperidone modulates the cytokine and chemokine release of dendritic cells and induces TNF-alpha-directed cell apoptosis in neutrophils. *Int.Immunopharmacol.* **12**:197-204. (2012/1) (SCI) IF:2.551
 19. Chang, S. W., P. Y. Lu, J. H. Guo, **T. C. Tsai**, Y. P. Tsao, and S. L. Chen. 2012. NRIP enhances HPV gene expression via interaction with either GR or E2. *Virology* **423**:38-48. (2012/2/5) (SCI) IF:3.2
 20. Chen, M. L., **T. C. Tsai**, L. K. Wang, Y. Y. Lin, Y. M. Tsai, M. C. Lee, and F. M. Tsai. 2012. Clozapine inhibits Th1 cell differentiation and causes the suppression of IFN-gamma production in peripheral blood mononuclear cells. *Immunopharmacol.Immunotoxicol.* **34**:686-694. (2012/8) (SCI) IF:1.617
 21. Wu, C. C., R. Y. Shyu, C. H. Wang, **T. C. Tsai**, L. K. Wang, M. L. Chen, S. Y. Jiang, and F. M. Tsai. 2012. Involvement of the prostaglandin D2 signal pathway in retinoid-inducible gene 1 (RIG1)-mediated suppression of cell invasion in testis cancer cells. *Biochim.Biophys.Acta* **1823**:2227-2236. (2012/12) (SCI) IF:5.128
 22. Shyu, R. Y., C. C. Wu, C. H. Wang, **T. C. Tsai**, L. K. Wang, M. L. Chen, S. Y. Jiang, and F. M. Tsai. 2013. H-rev107 regulates prostaglandin D2 synthase-mediated suppression of cellular invasion in testicular cancer cells.

J.Biomed.Sci. **20**:30. (2013/5) (SCI) IF:2.935

23. Chen, M. L., S. Wu, **T. C. Tsai**, L. K. Wang, and F. M. Tsai. 2013. Regulation of macrophage immune responses by antipsychotic drugs. *Immunopharmacol.Immunotoxicol.* **35**:573-580. (2013/10) (SCI) IF:1.617
24. Chen, M. L., S. Wu, **T. C. Tsai**, L. K. Wang, W. M. Chou, and F. M. Tsai. 2013. Effect of aqueous extract of *Tournefortia sarmentosa* on the regulation of macrophage immune response. *Int.Immunopharmacol.* **17**: 1002-1008. (2013/12) (SCI) IF:2.551
25. Wang, C. H., R. Y. Shyu, C. C. Wu, **T. C. Tsai**, L. K. Wang, M. L. Chen, S. Y. Jiang, and F. M. Tsai. 2014. Phospholipase A/Acyltransferase enzyme activity of H-rev107 inhibits the H-RAS signaling pathway. *J.Biomed.Sci.* **21**:36. (2014/5/1) (SCI) IF:2.935
26. Chen, M. L., S. Wu, **T. C. Tsai**, L. K. Wang, W. M. Chou, and F. M. Tsai. 2014. The caffeic acid in aqueous extract of *Tournefortia sarmentosa* enhances neutrophil phagocytosis of *Escherichia coli*. *Immunopharmacol.Immunotoxicol.* **36**:390-396. (2014/12) (SCI) IF:1.617
27. Chen, M. L., S. Wu, **T. C. Tsai**, L. K. Wang, and F. M. Tsai. 2014. Regulation of neutrophil phagocytosis of *Escherichia coli* by antipsychotic drugs. *Int.Immunopharmacol.* **23**:550-557. (2014/12) (SCI) IF: 2.551
28. Chen, H. H., W. P. Chen, W. L. Yan, Y. C. Huang, S. W. Chang, W. M. Fu, M. J. Su, I. S. Yu, **T. C. Tsai**, Y. T. Yan, Y. P. Tsao, and S. L. Chen. 2015. NRIP is newly identified as a Z-disc protein, activating calmodulin signaling for skeletal muscle contraction and regeneration. *J.Cell Sci.* **128**:4196-4209. (2015/11/15) (SCI) IF: 4.706
29. Wu, C. C., F. M. Tsai, M. L. Chen, S. Wu, M. C. Lee, **T. C. Tsai**, L. K. Wang, and C. H. Wang. 2016. Antipsychotic Drugs Inhibit Platelet Aggregation via P2Y 1 and P2Y 12 Receptors. *Biomed.Res.Int.* **2016**:2532371. (2016/3/16) (SCI) IF: 2.134

Conference Abstracts (研討會論文)

1. **Tsai, T. C.**, Y. L. Lee, W. C. Hsiao, Y. P. Tsao, and S. L. Chen. (2005) NRIP, a novel nuclear receptor interaction protein, enhances the transcriptional activity of nuclear receptors. Abstracts of papers presented at the 2005 meeting on System Biology : Global Regulation of Gene Expression. Cold Spring Harbor Laboratory, New York. (March 17-March 20, 2005), Poster 86
2. **Tsai, T. C.**, Y. L. Lee, W. C. Hsiao, Y. P. Tsao, and S. L. Chen. (2005) NRIP, a novel nuclear receptor interaction protein, enhances the transcriptional activity of nuclear receptors. The 20th Joint Annual Conference of Biomedical Science, Taipei, Taiwan (March 26-March 27, 2005), Poster 257 (One of the 18 best posters and abstracts of the symposium)
3. **Tsai, T. C.**, W. C. Hsiao, Y. L. Lee, Y. P. Tsao, and S. L. Chen. (2005) Human Papillomavirus Type 16 E5 Protein Binding to ErbB4 Affects the Phosphorylation of C-JUN and Transforming Activity. 22nd International Papillomavirus Conference, Vancouver, Canada (April 30-May 6, 2005), Poster
4. **Tsai, T. C.**, Y. L. Lee, W. C. Hsiao, Y. P. Tsao, and S. L. Chen. (2005) NRIP, a Novel Nuclear Receptor Interaction Protein, Enhances Hormone-Dependent Transcription Activity in Prostate and Cervical Cancers. Joint meeting of 3rd NHRI Conference on signal Transduction & 4th NHRI Conference on Developmental Biology, Zhu-Nan, Miao Lyi, Taiwan. (April 28- April 30, 2005), Poster 1 & 19
5. **Tsai, T.C.** (2005) NRIP, a Novel Nuclear Receptor Interaction Protein, Enhances the Transcriptional Activity of Nuclear Receptors in Prostate and Cervical Cancers. The 5th Graduate Institute of Life Sciences Conference of Ph.D. Student Thesis Research, National Defense Medical Center, Taipei, Taiwan (June 23- June24, 2005), Oral Presentation (Ph.D. Student Thesis Research Award)
6. Yeh, M.H., Lin, W.Y., Lee, P.Y., Lee, Y.S., Teng, H.F., Chi, C.Y., **Tsai, T.C.**, Way, T.D., Tsai, S.C., Chung, J.G., and Kao, M.C. (2007) Sensitized RNAi screening for human oral cancer to identify novel biomarkers. The 1st International Cancer Symposium in China Medical University & Hospital, Taichung, Taiwan (November 16 – 17, 2007), Poster I-29
7. Lin, W.Y., Yeh, M.H., Lee, P.Y., Lee, Y.S., Teng, H.F., Chi, C.Y., **Tsai, T.C.**, Way, T.D., Tsai, S.C., Chung, J.G., Lee, M.R., and Kao, M.C. (2008) The Oncogenic Signalling Pathway of the Human Oral Cancer HSC-3 Cell. The 23th Joint Annual Conference of Biomedical Sciences, Taipei, Taiwan (March 29-March 30, 2008), Poster P702
8. Kao, M.C., Yeh, M.H., Lin, W.Y., Lee, P.Y., Lee, Y.S., Teng, H.F., Chi, C.Y., **Tsai,**

- T.C.**, Way, T.D., Tsai, S.C., and Chung, J.G. (2008) A RNAi approach to the molecular mechanism leading to human oral carcinogenesis. 33rd FEBS Congress and 11th IUBMB Conference, June 28 ~ July 3, 2008, Athens, Greece. *Abstract #PP2D-7*.
9. Chih, Y.H., Lin, C.L., Kao, M.C., and **Tsai, T.C.*** (2010) Suppression of HER2/neu-Overexpressing Cancer by EBNA1-derived Polypeptide. The 25th Joint Annual Conference of Biomedical Science, Taipei, Taiwan (March 27-March 28, 2010), Poster P290
 10. Chih, Y.H., Tsai, F.M., Kao, M.C., and **Tsai, T.C.*** (2011) Mechanism of HER2/neu suppression by EBNA1-derived Polypeptide. The 26th Joint Annual Conference of Biomedical Science, Taipei, Taiwan (March 19-March 20, 2011), Poster P260
 11. Jhang, S.M., Tsai, F.M., Kao, M.C., and **Tsai, T.C.*** (2012) 17-AAG enhances EBNA1-derived polypeptide suppressed HER2/neu expression and resulted in growth inhibition in human ovarian cancer SKOV3 cells. The 27th Joint Annual Conference of Biomedical Science, Taipei, Taiwan (March 17-March 18, 2012), Poster P536
 12. Jhang, S.M., Tsai, F.M., Kao, M.C., and **Tsai, T.C.*** (2013) Synergistic activity of EBNA1-derived polypeptide and 17-AAG suppress HER2/neu mediated cell transformation in HER2-overexpressing ovarian cancer cells. The 28th Joint Annual Conference of Biomedical Science, Taipei, Taiwan (March 23-March 24, 2013), Poster P395
 13. Tsai, F.M., Wu, C.C., Wang, C. H., **Tsai, T.C.**, Shyu, R. Y., and Jiang, S. Y. (2014) Phospholipase A/Acyltransferase enzyme activity of H-rev107 inhibits the H-RAS signaling pathway. American Association for Cancer Research, Annual meeting 2014, San Diego, CA, USA (April 5 ~ April 9, 2014), Abstract No. 5276, Poster 29
 14. **Tsai, T.C.***, Ye, B.Y., Chou, W.M., and Tsai, F.M. (2015) Effect of aqueous extract of *Tournefortia sarmentosa* on growth inhibition in human breast cancer MCF-7 cells. The 30th Joint Annual Conference of Biomedical Science, Taipei, Taiwan (March 21-March 22, 2015), Poster P774
 15. Chen, C.C., Jhang, S.M., Chang, Y.T., Chou, W.M., and **Tsai, T.C.*** (2017) *Tournefortia sarmentosa* aqueous extract suppressed human ovarian cancer

SKOV3 cell transformation through ERK pathway. The 32th Joint Annual Conference of Biomedical Science, Taipei, Taiwan (March 25-March 26, 2017), Poster CM113

指導大專生國科會專題計畫

1. 池雅涵：研究EB病毒核抗原在過度表現神經膠原致癌基因之卵巢癌細胞中的角色。計畫編號：98-2815-C-415-026 - B, 執行期限：2009/07/01~2010/02/28。(NT 47,000)
2. 林珈龍：利用酵母菌雙雜交系統找尋EB病毒核抗原之交互作用蛋白並分析其功能。計畫編號：99-2815-C-415-005-B, 執行期限：2010/07/01~2011/02/28。(NT 47,000)