

吳進益 (Jin-Yi Wu) 副教授



姓名	吳進益	研究室編號	辦公室: A25-409B 實驗室: A25-405 及 A25-406
最高學歷	國立台灣大學 化學研究所 博士	研究室電話	05-2717925
研究領域	有機化學、天然物化學、藥物化學、抗氧化及抗癌活性機制分析、藥物動力學研究	電子郵件	jywu@mail.ncyu.edu.tw
主授科目	天然活性物質、儀器分析、藥物化學、藥物合成及分析、生物醫藥學導論(II)、生物醫藥學特論	個人網頁	

✚ 研究興趣 Research Interests

- 天然物萃取及結構鑑定，功能性評估-抗氧化、抗發炎及抗癌藥物的開發研究
- 藥物分子模擬與設計、合成、有機光化學及藥物光譜分析等相關研究
- 天然物有效成份對化學結構修飾(SAR)及抗氧化、抗癌活性的探討
- 黃柏有效成分 berberine 萃取及衍生物合成、抗癌活性機制分析及藥物動力學研究
- 光動力治療藥物 berberine 衍生物的合成及光譜研究
- 黃芩有效成分萃取純化及化學修飾，抗氧化及抗癌活性機制分析
- 斑蝥素衍生物合成及抗癌活性之分析
- 二苯乙烯類化合物萃取及衍生物合成、抗氧化及抗癌活性機制分析
- 植物精油萃取技術建立及產品開發之研究

✦ 研究計劃 Research Grants

- 2022/01 ~ 2023/12 思凱生科有限公司產學合作計畫(111A3-007) 以 PROTAC 技術設計及合成 Cyproheptadine -SAHA 及 -Thalidomide 藥物作為抗癌活性之研究 (計畫主持人)
- 2020/08 ~ 2021/01 勻耕農業企業社產學合作計畫(109A3-137) 雲林在地土肉桂產品開發及精油應用 (計畫主持人)
- 2020/01 ~ 2020/12 科技部計畫(MOST 109-NU-E-415-001-NU) 以伽瑪輻射誘變進行大豆育種並改良發酵益生菌與食用麴菌(2) (共同主持人)
- 2019/12 ~ 2020/12 科技部 (MOST 108-2731-M-415-001-) 國立嘉義大學自有貴重儀器共同使用服務計畫 (計畫主持人)
- 2019/11 ~ 2020/05 世鋒股份有限公司產學合作計畫(108A3-158) 台灣丹參栽培及主成分生物活性分析探討 (計畫主持人)
- 2019/06 ~ 2020/05 科技部計畫(MOST 108-2622-B-415-001-CC2) 產學合作計畫—開發生產 CU101 蛋白應用於珍珠龍膽及金目鱸飼糧(1/2) (共同主持人)
- 2019/01 ~ 2019/12 科技部計畫(MOST 108-NU-E-415-001-NU) 輻射照射處理於農業之應用 (共同主持人)
- 2018/09 ~ 2023/08 義美食品股份有限公司產學合作計畫(107A3-154) 台灣具潛力香花植物精油化合物相關基礎與應用之系列探討 (共同主持人)
- 2018/11 ~ 2019/05 世鋒股份有限公司產學合作計畫(107A3-194) 台灣丹參萃取及主成分定量分析探討
- 2018/12 ~ 2019/12 科技部 (MOST 107-2731-M-415-001-) 國立嘉義大學自有貴重儀器共同使用服務計畫
- 2016/09 ~ 2016/12 崇越科技股份有限公司產學合作計畫(105A3-147) 安永鮮魚精萃取技術之探討
- 2015/01 ~ 2015//12 台北榮總院內計畫(V104E5-002) 新型的親脂性取代去甲斑蝥素衍生物之合成、抗癌活性及藥物動力學評估
- 2014/11 ~ 2015/12 科技部 (MOST 103-2731-M-415-001-) 國立嘉義大學自有貴重儀器共同使用服務計畫
- 2014/01 ~ 2014/12 台北榮總院內計畫(V103E5-002) 新型的親脂性取代去甲斑蝥素衍生物之合成及其抗癌活性評估
- 2014/01 ~ 2014/12 產學合作計畫(103A3-004) 夜來香精油萃取技術開發及成分鑑定品管建立
- 2013/07~2014/08 行政院勞工委員會職業訓練局(102D3-033) 102 年補助大專校院辦理就業學程計畫-生技製藥培育人才學程
- 2012/01~2012/12 台北榮總院內計畫(V101E5-001) 去甲基斑蝥醯胺衍生物合成及抗癌活性之評估
- 2010/01~2011/01 台北榮總院內計畫(V99E2-001) 去甲基斑蝥醯胺衍生物合成及蛋白質磷酸分解酶抑制和抗癌活性之評估

- 2009/08~2010/07 聖馬爾定醫院研究計畫(98A3-043)黃酮類衍生物合成與抗氧化和抗菌活性評估
- 2009/01~2010/01 台北榮總院內計畫(V98E2-001)去甲基斑蝥素衍生物合成及蛋白質磷酸酶抑制活性之評估
- 2007/08~2008/07 國科會計畫(96-2113-M-415-003-)合成二苯乙烯衍生物在抗氧化及抗癌藥物之研究
- 2008/01~2009/01 台北榮總院內計畫(V97E2-001) 新型去甲基斑蝥素衍生物合成及抗癌活性之新藥開發評估
- 2006/08~2007/07 國科會計畫(95-2113-M-415-004-)合成新的黃酮類衍生物在免疫及癌症預防藥物的研究
- 2007/01~2008/01 台北榮總院內計畫(V96E2-006)設計及合成新型具有抗癌藥物的 Norcantharidin 衍生物
- 2005/08~2006/07 國科會計畫(94-2113-M-415-005-)合成新的具有抗氧化及抗癌藥物的黃酮類衍生物
- 2005/01~2005/12 農委會(94 農發-6.1-務-18(3))無患子高附加價值生物活性成分之分離與應用
- 2005/01~2005/11 校內計畫中草藥成份鑑定及相關藥物合成之研究
- 2004/03~2005/03 校內專題計畫中草藥及保健食品成分及毒物分析實驗室

✦ 個人經歷 Career Positions

- 2016/08 ~ 迄今 國立嘉義大學 微生物免疫與生物藥學系 副教授
- 2010/08 ~ 2016/07 國立嘉義大學 微生物免疫與生物藥學系 助理教授
- 2007/08 ~ 2010/07 國立嘉義大學 生物醫藥科學研究所 助理教授
- 2005/07/01 ~ 2005/09/30 中央研究院 國內學人短期來院訪問研究
- 2003/10 ~ 2007/07 國立嘉義大學 生物藥學研究所 助理教授
- 1999/10 ~ 2003/10 中央研究院 原子與分子科學研究所 博士後研究
- Natural Product Research 期刊論文審查(2012/07、2012/01、2010/12、2010/11、2020/05)
- Medicinal Chemistry Communication 期刊論文審查(2013/02、2015/12)
- Current Medicinal Chemistry 期刊論文審查(2012/10)
- Bioorganic & Medicinal Chemistry Letters 期刊論文審查(2012/11、2015/04、2016/06)
- Phytochemistry Letters 期刊論文審查(2013/04、2013/05、2015/04)
- Letters in Drug Design & Discovery 期刊論文審查(2013/05)
- Molecules 期刊論文審查(2015/11、2016/04、2016/08、2016/09、2016/10、2016/11、2017/04、2017/06、2017/09、2017/12、2018/02、2018/04、2018/05、2018/07、2019/4、2019/11、2020/03、2020/12、2022/02、2022/05、2022/06、2022/07)
- Journal of Traditional and Complementary Medicine 期刊論文審查(2014/06、2014/11)
- Medicinal Chemistry Research 期刊論文審查(2014/10、2016/11、2017/07、2018/10、2019/09)
- Bioorganic & Medicinal Chemistry 期刊論文審查(2015/01)
- Research on Chemical Intermediates 期刊論文審查(2015/03、2015/05)

- PLoS ONE 期刊論文審查(2015/04)
- Processes 期刊論文審查(2021/01)
- ChemistrySelect 期刊論文審查(2020/04、2020/12)
- Journal of the Serbian Chemical Society 期刊論文審查(2015/06)
- International Journal of Molecular Sciences 期刊論文審查(2016/07、2021/07)
- ACS Medicinal Chemistry Letters 期刊論文審查(2016/12)
- Chemical Biology & Drug Design 期刊論文審查(2016/12)
- New Journal of Chemistry 期刊論文審查(2017/08)
- ChemMedChem 期刊論文審查(2017/10)
- Bioorganic Chemistry 期刊論文審查(2018/03)
- Phytomedicine 期刊論文審查(2018/06、2018/09)
- Journal of Ethnopharmacology 期刊論文審查(2018/08、2020/01)
- Nucleosides, Nucleotides and Nucleic Acids 期刊論文審查(2020/03)
- Biomedicine & Pharmacotherapy 期刊論文審查(2021/08、2022/04)
- Catalysts 期刊論文審查(2022/09)
- Sustainable Chemistry and Pharmacy 期刊論文審查(2022/11)
- Nutrients 期刊論文審查(2022/09)
- Pharmaceutics 期刊論文審查(2021/05、2023/01)
- Plants 期刊論文審查(2023/04)
- Journal of Pharmacy and Pharmacology 期刊論文審查(2020/02)

✚ 研究獎項 Research awards

- 2002/02 獲中央研究院補助赴美國舊金山出席”The 46th Annual Meeting Biophysical Society” 發表論文。
- 2001/11 由中央研究院補助在台灣主辦出席”7th international Meeting on Hole Burning, Single Molecule, and Related Spectroscopies: Science and Applications” 發表論文。
- 2010/05 第七屆國家新創獎學術研究組 利用本土生物資材調製高級夢幻香水之研發 國立嘉義大學香水香精香料研發團隊
- 2019/12 第十六屆國家新創獎續獎-新創精進獎 利用本土生物資材調製高級夢幻香水之研發 國立嘉義大學香水香精香料研發團隊

✚ 期刊論文 Publication

1. **Jin-Yi Wu**, Lih-Geeng Chen, Chia-Wen Hu, Kuan-Chi Chiu, Wenhsin Lin, Pei-Chun Ho, Brian Bor-Chun Weng*, “Immunotoxicity and Anti-Inflammatory Characterizations of Prenylated Flavonoids—The Lipophilic 7-*O*-Terpenylated Wogonin”, *Life* **2022**, *12*(12), 2116. [SCI, IF: 3.253, 54/113 (45.13%) in BIOLOGY]
2. Cheng-Huang Shen, **Jin-Yi Wu**, Shou-Chieh Wang, Chi-Hung Wang, Chen-Tai Hong, Pei-Yu Liu, Sin-Rong Wu, Yi-Wen Liu*, “The suppressive role of phytochemical-induced glutathione *S*-transferase Mu 2 in human urothelial carcinoma cells”, *Biomedicine & Pharmacotherapy* **2022**, *151*, 113102. [SCI, IF: 7.419, 26/279 (9.32%) in PHARMACOLOGY & PHARMACY]
3. Jia-Ming Chang, **Jin-Yi Wu**, Shu-Hsin Chen, Wen-Ying Chao, Hsiang-Hao Chuang, Kam-Hong Kam, Pei-Wen Zhao, Yi-Zhen Li, Yu-Pei Yen, Ying-Ray Lee*, “9-*O*-Terpenyl-Substituted Berberubine

Derivatives Suppress Tumor Migration and Increase Anti-Human Non-Small-Cell Lung Cancer Activity”, *International Journal of Molecular Sciences*, **2021**, 22(18), 9864. [SCI, IF: 6.208, 69/298 (23.15%) in BIOCHEMISTRY & MOLECLAR BIOLOGY]

4. Ganbolor Jargalsaikhan, **Jin-Yi Wu**, Yen-Chou Chen, Ling-Ling Yang, Ming-Shun Wu*, “Comparison of the Phytochemical Properties, Antioxidant Activity and Cytotoxic Effect on HepG2 Cells in Mongolian and Taiwanese Rhubarb Species”, *Molecules* **2021**, 26(5), 1217. [SCI, IF: 4.928, 114/297 (38.38%) in BIOCHEMISTRY & MOLRCULAR BIOLOGY]
5. Jia-Ming Chang, Kam-Hong Kam, Wen-Ying Chao, Pei-Wen Zhao, Shu-Hsin Chen, Hui-Chen Chung, Yi-Zhen Li, **Jin-Yi Wu***, Ying-Ray Lee*, “Berberine Derivatives Suppress Cellular Proliferation and Tumorigenesis In Vitro in Human Non-Small-Cell Lung Cancer Cells”, *International Journal of Molecular Sciences*, **2020**, 21(12), 4218. [SCI, IF: 6.208, 69/298 (23.15%) in BIOCHEMISTRY & MOLECLAR BIOLOGY]
6. **Jin-Yi Wu**, En-Tung Tsai, Fang-Yu Yang, Jui-Feng Lin, Hui-Fen Liao, Yu-Jen Chen, Cheng-Deng Kuo*, “Inhibition of Jurkat T Cell Growth by *N*-farnesyl-norcantharimide Through Up-regulation of Tumor Suppressor Genes and Down-regulation of Genes for Steroid Biosynthesis, Metabolic Pathways and Fatty Acid Metabolism”, *Anticancer Research*, **2020**, 40(5), 2675-2685. [SCI, IF: 2.435, 206/245 (84.08%) in ONCOLOGY]
7. Hong-Jhih Lin, Jinn-Hsuan Ho, Li-Chen Tsai, Fang-Yu Yang, Ling-Ling Yang, Cheng-Deng Kuo, Lih-Geeng Chen, Yi-Wen Liu, **Jin-Yi Wu ***, “Synthesis and In Vitro Photocytotoxicity of 9-/13-Lipophilic Substituted Berberine Derivatives as Potential Anticancer Agents”, *Molecules* **2020**, 25, 677. [SCI, IF: 4.928, 114/297 (38.38%) in BIOCHEMISTRY & MOLRCULAR BIOLOGY]
8. Ching-Chiung Wang, Hsyeh-Fang Chen, **Jin-Yi Wu**, Lih-Geeng Chen*, “Stability of Principal Hydrolysable Tannins from *Trapa taiwanensis* Hulls”, *Molecules*, **2019**, 24(2), 365. [SCI, IF: 4.928, 114/297 (38.38%) in BIOCHEMISTRY & MOLRCULAR BIOLOGY]
9. Chiou*, R. Y.-Y., P.-C. Chiu, J.-C. Chang, J.-C. Li, C.-W. Hsieh, **J.-Y. Wu**, S.-M. Lin, Y.-L. Lin and B. B.-C. Weng. Discovery of new stilbene antioxidants of the bio-elicited peanut sprout powder (BPSP) and longevity extension of mice fed with BPSP-supplemented diets. *Food Nutr. Sci.* **2017**, 8, 141-162.
10. Chieh-Hsiang Lu, Shu-Hsin Chen, Yi-Sheng Chang, Yi-Wen Liu, **Jin-Yi Wu**, Yun-Ping Lim, Hui-I Yu, Ying-Ray Lee* “Honokiol, a potential therapeutic agent, induces cell cycle arrest and program cell death *in vitro* and *in vivo* in human thyroid cancer cells”, *Pharmacological Research*, **2017**, 115, 288-298. [SCI, IF: 10.334, 15/279 (5.38%) in PHARMACOLOGY & PHARMACY]
11. Ming-Che Chang, **Jin-Yi Wu**, Hui-Fen Liao, Yu-Jen Chen, Cheng-Deng Kuo* “Comparative assessment of therapeutic safety of norcantharidin, *N*-farnesyloxy-norcantharimide, and *N*-farnesyl-norcantharimide against Jurkat T cells relative to human norm al lymph oblast: A quantitative pilot study”, *Medicine*, **2016**, 95(31): e4467. [SCI, IF: 1.817, 123/172 (71.51%) in MEDICINE, GENERAL & INTERNAL]
12. Mei-Yi Lin, Su-Yin Chiang, Yi-Zhen Li, Mei-Fang Chen, Yueh-Sheng Chen, **Jin-Yi Wu***, Yi-Wen Liu* “Anti-tumor effect of *Radix Paeoniae* Rubra extract on mice bladder tumors using intravesical therapy”, *Oncology Letters*, **2016**, 12(2): 904-910. [SCI, IF: 3.111, 176/245 (71.84%) in ONCOLOGY]
13. Hung-Chih Hsu, Wen-Ming Chang, **Jin-Yi Wu**, Chin-Chin Huang, Fung-Jou Lu, Yi-Wen Chuang, Pey-Jium Chang, Kai-Hua Chen, Chang-Zern Hong, Rang-Hui Yeh, Tsan-Zon Liu, Ching-Hsein Chen*

- “Folate deficiency triggered apoptosis of synoviocytes: role of overproduction of reactive oxygen species generated via NADPH oxidase/mitochondrial complex II and calcium perturbation”, *PLoS ONE*, **2016**, *11*(1): e0146440. [SCI, IF: 2.776, 24/69 (34.78%) in MULTIDISCIPLINARY SCIENCES]
14. Shao-Hung Wang, Ching-Hsein Chen, Chih-Yu Lo, Ji-Zhen Feng, Hong-Jhih Lin, Po-Ya Chang, Ling-Ling Yang, Lih-Geeng Chen, Yi-Wen Liu, Cheng-Deng Kuo and **Jin-Yi Wu***, “Synthesis and biological evaluation of novel 7-*O*-lipophilic substituted baicalein derivatives as potential anticancer agents”, *MedChemComm*, **2015**, *6*, 1864-1873. [SCI, IF: 5.121, 18/63 (28.57%) in CHEMISTRY, MEDICINAL]
 15. Ming-Che Chang, **Jin-Yi Wu**, Hui-Fen Liao, Yu-Jen Chen and Cheng-Deng Kuo*, “*N*-farnesyloxy-norcantharimide inhibits progression of human leukemic Jurkat T cells through regulation of mitogen-activated protein kinase and interleukin-2 production”, *Anti-cancer Drugs*, **2015**, *26*(10), 1034-1042. [SCI, IF: 2.389, 211/279 (75.63%) in PHARMACOLOGY & PHARMACY]
 16. Shao-Hung Wang, Chih-Yu Lo, Zhong-Heng Gwo, Hong-Jhih Lin, Lih-Geeng Chen, Cheng-Deng Kuo and **Jin-Yi Wu***, “Synthesis and biological evaluation of lipophilic 1,4-naphthoquinone derivatives against human cancer cell lines”, *Molecules*, **2015**, *20*(7), 11994-12015. [SCI, IF: 4.928, 114/297 (38.38%) in BIOCHEMISTRY & MOLECULAR BIOLOGY]
 17. Ming-Che Chang, En-Tung Tsai, **Jin-Yi Wu**, Hui-Fen Liao, Yu-Jen Chen and Cheng-Deng Kuo*, “*N*-Farnesyloxy-norcantharimide and *N*-farnesyl-norcantharimide inhibit the progression of leukemia and increase survival days in a syngeneic mouse leukemia model”, *Anti-cancer Drugs*, **2015**, *26*(5), 508-517. [SCI, IF: 2.389, 211/279 (75.63%) in PHARMACOLOGY & PHARMACY]
 18. **Jin-Yi Wu***, Cheng-Deng Kuo, Chien-Yu Chu, Min-Shin Chen, Jia-Hua Lin, Yu-Jen Chen and Hui-Fen Liao, “Synthesis of novel lipophilic *N*-substituted norcantharimide derivatives and evaluation of their anticancer activities”, *Molecules*, **2014**, *19*(6), 6911-6928. [SCI, IF: 4.928, 114/297 (38.38%) in BIOCHEMISTRY & MOLECULAR BIOLOGY]
 19. Jen-Tsung Yang, Zih-Ling Li, **Jin-Yi Wu**, Fung-Jou Lu, Ching-Hsein Chen*, “An oxidative stress mechanism of shikonin in human glioma cells”, *PLoS ONE*, **2014**, *9*(4): e94180. [SCI, IF: 3.752, 29/74 (39.19%) in MULTIDISCIPLINARY SCIENCES]
 20. **Jin-Yi Wu**, Kun-Wei Tsai, Yi-Zhen Li, Yi-Sheng Chang, Yi-Chien Lai, Yu-Han Laio, Jiann-Der Wu and Yi-Wen Liu*, “Anti-bladder-tumor effect of baicalein from *Scutellaria baicalensis* Georgi and its application *in vivo*”, *Evidence-based Complementary and Alternative Medicine*, **2013**, *2013*, 579751. [SCI, IF: 2.650, 16/30 (53.33%) in INTEGRATIVE & COMPLEMENTARY MEDICINE]
 21. Ming-Yang Lee, Yi-Wen Liu, Ming-Ho Chen, **Jin-Yi Wu**, Hsing-Ying Ho, Qwa-Fun Wang, Jing-Jing Chuang*, “Indirubin-3'-monoxime promotes autophagic and apoptotic death in JM1 human acute lymphoblastic leukemia cells and K562 human chronic myelogenous leukemia cells”, *Oncology Reports*, **2013**, *29*(5), 2072-2078. [SCI, IF: 4.136, 128/245 (53.33%) in ONCOLOGY]
 22. **J.-Y. Wu**, W.-C. Chen, Y.-Y. Wu, J.-T. Chen, L.-G. Chen, R. Y.-Y. Chiou*, “NMR-based elucidation of the positional C6-*O*-glucopyranosyl substitution of gomphrenin I isolated from *Basella alba* fruits”, *Journal of Agricultural Science and Applications*, **2013**, *2*(1), 8-12.

23. Chih-Yu Lo, Lin-Chen Hsu, Min-Shin Chen, Yi-Jing Lin, Lih-Geeng Chen, Cheng-Deng Kuo, **Jin-Yi Wu***, "Synthesis and anticancer activity of a novel series of 9-*O*-substituted berberine derivatives: a lipophilic substitute role", *Bioorganic & Medicinal Chemistry Letters*, **2013**, 23, 305-309. [SCI, IF: 2.940, 23/56 (41.07%) in CHEMISTRY, ORGANIC]
24. Shu-Mei Lin, **Jin-Yi Wu**, Chen Shu, Sophia Ferng, Chih-Yu Lo, Robin Y.-Y. Chiou*, "Identification and mode of action of 5-hydroxymethyl-2-furfural (5-HMF) and 1-methyl-1,2,3,4-tetrahydro- β -carboline-3-carboxylic acid (MTCA) as potent xanthine oxidase inhibitors in vinegars", *Journal of Agricultural and Food Chemistry*, **2012**, 60(39), 9856-9862. [SCI, IF: 5.895, 3/57 (5.26%) in AGRICULTURE, MULTIDISCIPLINARY]
25. Shih-Hao Wang, Ming-Yuan Kao, She-Ching Wu, Dan-Yuan Lo, **Jin-Yi Wu**, Ju-Chun Chang, and Robin Y.-Y. Chiou* "Oral administration of *Trapa taiwanensis* Nakai fruit skin extracts conferring hepatoprotection from CCl₄-caused injury", *Journal of Agricultural and Food Chemistry*, **2011**, 59, 3686-3692. [SCI, IF: 5.895, 3/57 (5.26%) in AGRICULTURE, MULTIDISCIPLINARY]
26. **Jin-Yi Wu**, Chi-Hung Chen, Wen-Huei Chang, King-Thom Chung, Yi-Wen Liu, Fung-Jou Lu, Ching-Hsein Chen*, "Anti-cancer effects of protein extracts from *Calvatia lilacina*, *Pleurotus ostreatus*, and *Volvariella volvacea*", *Evidence-based Complementary and Alternative Medicine* **2011**, 2011, ID 982368. [SCI, IF: 2.650, 10/27 (37.04%) in INTEGRATIVE & COMPLEMENTARY MEDICINE]
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28. **Jin-Yi Wu**, Kun-Wei Tsai, Jia-Jen Shee, Yi-Zhen Li, Ching-Hsein Chen, Jing-Jing Chuang, Yi-Wen Liu*, "4'-Chloro-3,5-dihydroxystilbene induces lung cancer cell death through multiple pathways", *Acta Pharmacologica Sinica* **2010**, 31, 81-92. [SCI, IF: 4.010, 49/172 (28.49%) in] CHEMISTRY, MULTIDISCIPLINARY]
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