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教學科目: 儀器分析、藥物分析、藥物分析實驗、分析化學、分析化學實驗、中藥研究進展、現代生物技術、藥學基礎化學實驗。

研究方向: 基於 LC-MS-NMR 整合分析方法應用於炎症性脂肪酸和能量代謝、代謝流以及多維蛋白組學分析方法應用於腫瘤、過敏性疾病和呼吸系統疾病等研究。

現任中藥質量研究國家重點實驗室 澳門科技大學副教授。2004 年獲日本國立 Niigata 大學工學碩士 (核磁共振應用方向)，2009 年香港浸會大學化學系分析化學專業哲學博士 (質譜應用方向) 畢業，後在香港大學李嘉誠醫學院病理系從事博士後研究工作 (色譜、核磁共振和質譜聯用)，籌建了基於液相色譜 (LC)、質譜 (MS)、核磁共振 (NMR) 整合分析應用的 Metabolomics and Advanced Analytical Laboratory。2011 年 11 月加入澳門科技大學，籌建了基於 LC-MS-NMR 的包括組學技術與創新藥物研究中心和澳門核磁共振與光譜中心。研究方面，目前主要從事基於 LC、MS 和 NMR 的代謝組學和蛋白組學整合分析方法研究過敏性疾病、腫瘤病理機制和環境毒理分析、中藥和食品質量控制的分析新方法和新技術等。截至目前為止，以第一和通訊作者 (含共同) 在 *Anal Chem, J Hazard Mater, Cell Commun Signal, Anal Chim Acta, J Proteome Res, J Agric Food Chem, J Nat Prod* 和 *J Chromatogr A* 等，及合作在 *Gastroenterology, J Hepatol, PNAS* 等雜誌上發表色譜-質譜和核磁共振應用相關 SCI 文章 60 餘篇，申請國際發明專利 5 項。

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近 3 年來發表的 SCI 期刊論文：(*Corresponding author; #co-first author)

1. **J.L. Wu**, F. Ji, H. Zhang, C. Hu, M.H. Wong, D. Hu, Z. Cai. Formation of dioxins from triclosan with active chlorine: A potential risk assessment. *J Hazard Mater.* **2019**, 367,128-36.
2. M. Zhang, Y. Pan, D. Tang, R.G. Dorfman, L. Xu, Q. Zhou, L. Zhou, Y. Wang, Y. Li, Y. Yin, B. Kong, H. Friess, S. Zhao, **J.L. Wu***, L. Wang *, X. Zou *. Low levels of pyruvate induced by a positive feedback loop protects cholangiocarcinoma cells from apoptosis. *Cell Commun Signal.* **2019**, 17, 23.
3. Y. Ge, X. Bian, B. Sun, M. Zhao, Y. Ma, Y.P. Tang, N. Li*, **J.L. Wu***. Dynamic profiling of phenolic acids during Pu-erh tea fermentation using derivatization LC-MS approach. *J Agric Food Chem.* **2019,** 67, 4568-4577.
4. X. Yan, Y. Zhuo, X. Bian, J. Li, Y. Zhang, L. Ma, G. Lu, M.Q. Guo, **J.L. Wu***, N. Li*. Integrated Proteomics, Biological Functional Assessments, and Metabolomics Reveal Toosendanin-Induced Hepatic Energy Metabolic Disorders. *Chem Res Toxicol.* **2019,** 32, 668-80.
5. M. Zhang, L. Zhou, Y. Wang, R. Gregory Dorfman, D. Tang, L. Xu, Y. Pan, Q. Zhou, Y. Li, Y. Yin, S. Zhao, **J.L. Wu***, C. Yu*. Faecalibacterium prausnitzii produces butyrate to decrease c-Myc-related metabolism and Th17 differentiation by inhibiting histone deacetylase 3. *Int Immunol.* **2019,** 31, 499-514.
6. C.X. Cai, X. Bian, X.Q. Liu, J.X. Wang, H.S. Hu, S.G. Zheng, B.Q. Sun*, **J.L. Wu***. Eicosanoids metabolized through LOX distinguish Asthma-COPD Overlap from COPD by metabolomics study. *Int J Chron Obstruct Pulmon Dis.* **2019**, 14, 1769-78.
7. Cheng Luo, Xiqing Bian, Qian Zhang, Zhenyan Xia, Bowen Liu, Qi Chen, Chien-Chih Ke, **J.L. Wu***, Y. Zhao* Shengui Sansheng San Ameliorates Cerebral Energy Deficiency Via Citrate Cycle after Ischemic Stroke. *Front Pharmacol.* **2019**, 10, 386.

8. Y. Zhang, X. Bian, J. Yang, H. Wu*, **J.L. Wu***, N. Li*. Metabolomics of Clinical Poisoning by Aconitum Alkaloids using derivatization LC-MS. *Front Pharmacol.* **2019** 10, 275.

9. L. Xu, L. Wang, L. Zhou, R.G. Dorfman, Y. Pan, D. Tang, Y. Wang, Y. Yin, C. Jiang, X. Zou, **J.L. Wu***, M. Zhang*. The SIRT2/cMYC Pathway Inhibits Peroxidation-Related Apoptosis In Cholangiocarcinoma Through Metabolic Reprogramming. *Neoplasia* **2019**, 21, 429-41.

10. X. Bian, N. Li,* B. Tan, B. Sun, M. Q. Guo, G. Huang, L. Fu, W.L.W. Hsiao, L. Liu,* **J.L. Wu***. Polarity-tuning Derivatization-LC-MS Approach for Probing Global Carboxyl-containing Metabolites in Colorectal Cancer. *Anal Chem.* **2018,** 90, 11210-5.

11. W.Y. Gu, M.X. Liu, B.Q Sun*, M.Q. Guo, **J.L Wu***, N. Li*. Profiling of polyunsaturated fatty acids using off-line and on-line solid phase extraction-nano-liquid chromatography-quadrupole-time-of-flight mass spectrometry in human serum. *J Chromatogr A* **2018**, 1537, 141-6.

12. Y. Zhuo#, **J.L. Wu#**, X. Yan, M.Q. Guo, N. Liu, H. Zhou, L. Liu, N. Li. Strategy for Hepatotoxicity Prediction Induced by Drug Reactive Metabolites Using Human Liver Microsome and Online 2D-Nano-LC-MS Analysis. *Anal Chem.* **2017**, 89, 13167-75. (#These authors contributed equally to this work).

13. X. Bian, B. Sun, P. Zheng, N. Li*, **J.L. Wu***. Derivatization enhanced separation and sensitivity of long chain-free fatty acids: application to asthma using targeted and non-targeted liquid chromatography-mass spectrometry approach. *Anal Chim Acta* **2017**, 989, 59-70.

14. M.Z. Zhu, Na Li, Y.T. Wang, N. Liu, M.Q. Guo, H. Zhou, L. Liu* **J.L. Wu***. Acid/Salt/pH Gradient Improved Resolution and Sensitivity in Proteomics Study Using 2D SCX-RP LC-MS. *J Proteome Res.* **2017**, 16, 3470-5.

15. M. Zhu, N. Li, M. Zhao, W Yu, **J.L. Wu***. Metabolomic profiling delineate taste qualities of tea leaf pubescence. *Food Res Int.* **2017**, 94, 36-44.

16. Y. He, W. Liu, L. Chen, G. Lin, Q. Xiao, C. Gao, **J.L. Wu***, Z. Lin*. Facile synthesis of $Ti4^{+}$ -immobilized affinity silica nanoparticles for the highly selective enrichment of intact phosphoproteins. *J Sep Sci.* **2017**, 40, 1516-23.

17. I. Khan, G. Huang, X.A. Li, W. Liao, W. K. Leong, W. Xia, X. Bian, **J.L. Wu**, W.L.W. Hsiao*. Mushroom polysaccharides and jiaogulan saponins exert cancer preventive effects by shaping the gut microbiota and microenvironment in $Apc^{Min/+}$ mice. *Pharmacol Res.* **2019**, accepted.

18. G. Chen, M.Fan, B. Sun, **J.L. Wu**, N. Li, M. Guo. Advances in MS based stratigies for Probing Ligand-Target Interactions: Focus on Soft Ionization Mass Spectrometric Techniques. *Front Chem.* **2019**, accepted.

19. M. Fan, G. Chen, B. Sun, **J.L. Wu**, N. Li, S.D. Sarker, L. Nahar, M. Guo. Screening for natural inhibitors of human topoisomerases from medicinal plants with bio-affinity ultrafiltration and LC–MS. *Phytochem Rev.* **2019** July 27. doi: 10.1007/s11101-019-09635-x.

20. M. Fan, Y. Tian, G. Chen, S.D. Sarker, L. Nahar, **J.L. Wu**, N. Li, M. Guo. Enrichment and analysis of quaternary alkaloids from Zanthoxylum simulans using weak cation exchange solid-phase extraction coupled with LC-MS. *Phytochem Anal.* **2019** Jul 17. doi: 10.1002/pca.2860.

21. X. Zong, X. Yan, **J. L. Wu,** Z. Liu, H. Zhou, N. Li, L. Liu. Potentially Cardiotoxic Diterpenoid Alkaloids from the Roots of Aconitum carmichaelii. *J Nat Prod.* **2019,** 82, 980-9.

22. G.L. Chen, M.X. Fan, **J.L. Wu**, N. Li, M.Q. Guo. Antioxidant and anti-inflammatory properties of flavonoids from lotus plumule. *Food Chem.* **2019**, 277, 706-712.

23. X.X. Fan, E.L.H. Leung, Y. Xie, Z.Q. Liu, Y.F. Zheng, X.J. Yao, L.L. Lu, **J.L. Wu**, J.X. He, Z.W. Yuan, J. Fu, C.L. Wei, J. Huang, D.K. Xiao, L.X. Luo, Z.B. Jiang, Y.L. Zhou, R.K.T. Kam and L. Liu*. Suppression of lipogenesis via ROS- AMPK signaling for treating malignant and proliferative diseases. *Antioxid Redox Signal.* **2018,** 28, 339-57.

24. L.D. Ma, Y.T. Wang, J.R. Wang, **J.L. Wu**, X.S. Meng, P. Hu, X. Mu, Q.L. Liang, G.A. Luo. Design and fabrication of a liver-on-a-chip platform for convenient, highly efficient, and safe in situ perfusion culture of 3D hepatic spheroids. *Lab Chip.* **2018,** 18, 2547-62.

25. M.Z. Zhu, G.L. Chen, **J.L. Wu**, N. Li, Z.H. Liu, M.Q. Guo. Recent development in mass spectrometry and its hyphenated techniques for the analysis of medicinal plants. *Phytochem Anal.* **2018**, 29, 365-74.

26. Y. Liang, G.Y. Yan, **J.L. Wu**, X. Zong, Z. Liu, H. Zhou, L. Liu, N. Li. Qualitative and quantitative analysis of lipo-alkaloids and fatty acids in Aconitum carmichaelii using LC-MS and GC-MS. *Phytochem Anal.* **2018**, 29, 398-405.

27. G. Chen, **J.L. Wu**, N. Li, M.Q. Guo, Screening for anti-proliferative and anti-inflammatory components from *Rhamnus davurica Pall.* using bio-affinity ultrafiltration with multiple drug targets. *Anal Bioanal Chem.* **2018**, 410, 3587-95.

28. W. Xu, X. Zhang, **J.L. Wu**, L. Fu, D. Liu, N. Wong, J. Yu. O-GlcNAc transferase promotes fatty liver-associated liver cancer through inducing palmitic acid and activating endoplasmic reticulum stress. *J Hepatol.* **2017**, 67, 310-20.

29. L. Fu, Y.R. Qin, X.Y. Ming, X. Zuo, Y.W. Diao, L.Y. Zhang, J. Ai, B.L. Liu, T.X. Huang, T.T. Cao, B.B. Tan, D. Xiang, C.M. Zeng, J. Gong, Q.C. Zhang, S.S. Dong, J. Chen, H. Liu, **J.L. Wu**, R.Z. Qi, D. Xie, L.D. Wang, X.Y. Guan. RNA editing of SLC22A3 drives early tumor invasion and metastasis in familial esophageal cancer. *PNAS* **2017**, 114, E4631-40.

30. T.T. Cao, D. Xiang, B.L. Liu, T.X. Huang, B.B. Tan, C.M. Zeng, Z.Y. Wang, X.Y. Ming, L.Y. Zhang, G. Jin, F. Li, **J.L. Wu**, X.Y. Guan, D. Lu, L. Fu. FZD7 is a novel prognostic marker and promotes tumor metastasis via WNT and EMT signaling pathways in esophageal squamous cell carcinoma. *Oncotarget* **2017**, 8, 65957-68.

31. L. Huang, Y. Dong Y, **J.L. Wu**, P. Wang, H. Zhou, T. Li, L. Liu. Sinomenine-induced histamine release-like anaphylactoid reactions are blocked by tranilast via inhibiting NF-κB signaling. *Pharmacol Res.* **2017**, 125, 150-60.

32. X.X Zong, G. Yan, **J.L. Wu**, E.L Leung, H. Zhou, N. Li, L. Liu. New C19-Diterpenoid Alkaloids from the Parent Roots of Aconitum carmichaelii. *Tetrahedron Lett.* **2017**, 58, 1622.

33. X. Li, C.C. Wong, Z. Tang, **J.L. Wu**, S. Li, Y Qian, J. Xu, Z. Yang, Y. Shen, J. Yu, Z. Cai. Determination of amino acids in colon cancer cells by using UHPLC-MS/MS and [U-$^{13}C_5$]-glutamine as the isotope tracer. *Talanta* **2017**, 162, 285-92.

專利

I. **J.L. Wu**, N Li, L Liu, W.Y. Gu, X.Q. Bian. Method and Kit for Detecting Carboxyl-Containing Compound. *Australian Patent* 2018100592.

II. **J.L. Wu**, N Li, L Liu, W.Y. Gu, X.Q. Bian. Method of determining histamine in a sample and kit for doing the same. *Australian Patent* 2017100545.

III. G.A. LUO, L.D. Ma, Y.T Wang, J.R. Wang and **J.L. Wu** Microfluidic perfusion device, system and fabrication method thereof. *Australian Patent* 2018100361.

IV. N. LI, **J.L. Wu**, L. Liu, Y. Zhuo and X. Yan. Methods for prediction of hepatotoxicity induced by compound reactive metabolites. *Australian Patent* 2018100121.

V. L. Leung, L Liu, X. Fan, **J.L. Wu**, Application of analkalod derved fromachinese herbal for treatment of cancer by inhibiting cholesterol synthesis and fatty acid oxidation. *US patent* US 2015/0307508 A1.

學術機構及社會任職

1) 中國醫藥生物技術協會藥物分析技術專業委員會常務委員
2) 廣東省預防醫學會過敏病預防與控制專業委員會副主任委員
3) 世界中醫藥學會聯合會中醫藥免疫專業委員會常務理事
4) 中國研究型醫院學會過敏醫學專業委員會委員
5) 中國環境科學學會環境化學專業委員會委員
6) 澳門風濕病研究國際合作聯盟理事會理事
7)《色譜》雜誌青年編委

近3年研究基金：

1. 2018：NSFC-FDCT (自然科學基金-澳門科學技術基金聯合基金) 肝癌氨基酸代謝流特徵譜的鑒定及干預新策略. **2,071,000MOP**, ***Co-I***;
2. 2018：NSFC (81871736) 塵蟎過敏兒童治療的代謝組學與免疫調節協同機制研究. **570,000 RMB**, ***Co-I***;
3. 2018：呼吸疾病國家重點實驗室2017年度開放課題 (SKLRD-OP201803)，基於多元不飽和脂肪酸作為塵蟎致敏兒童脫敏治療炎症反應指標的機制研究. **200,000RMB, *PI***;
4. 2017: FDCT (009/2017/A1) 解碼細胞－細胞對話：基於多維分析技術的中藥對外泌體分泌及成分的影響研究 (Decoding cell-cell talk: influence study of exosomes secretion and composition for TCM using multiple analytical approaches). **2,351,800MOP**, ***PI***;
5. 2017: 廣州醫科大學建設高水平大學科研項目(B17017008019)，基於代謝組學整合分析兒童塵蟎過敏及脫敏治療機制研究. **500,000 RMB, *PI***.