

李 婷



職稱：教授、博士生導師

學院/部門：中藥質量研究國家重點實驗室，澳門藥物及健康應用研究院

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主要研究方向

- 1) 採用多組學技術研究炎症及自身免疫性疾病的發病機制；2) 藥物作用新機制及新靶點研究；
- 3) 新藥研發

簡介

李婷教授於 2010 年畢業於香港浸會大學，取得博士學位並進行博士後研究，2011 年 9 月加入澳門科技大學中藥質量研究國家重點實驗室、澳門藥物及健康應用研究院擔任助理教授，後被晉升為副教授及教授。已在 *Pharmacological Research*, *Free Radical Biological Medicine*, *Acta Pharmaceutica Sinica B (cover story)*, *Angew Chem Int Ed Engl.* 以及 *Nature Medicine* 等雜誌發表 SCI 學術論文 60 餘篇；授權國際發明專利 10 項（美國專利 3 項），中國發明專利 1 項；獲教育部自然科學獎一等獎（2014 及 2018 年），澳門科學技術獎一等獎（2016 年）及二等獎（2022 年），中國生物物理學會女科學家優秀科研成果三等獎（2023 年，個人獎）等多項獎項。作為課題負責人，獲國家重點研發計畫“政府間國際科技創新合作”，澳門科技發展基金等 10 余項資助。李博士亦為 WHO 傳統醫學合作中心（澳門）專家，世界中醫藥學會聯合會中藥免疫專業委員會常務理事，中國生物醫學工程學會免疫治療工程分會委員，中國抗炎免疫藥學專業委員會委員，中國中西結合學會臨床藥理與毒理專業委員會理事，並擔任 MedComm - Future Medicine 副主編及 *Frontiers in Immunology*, *Microstructures* 等學術雜誌編委。主要研究方向：1) 採用多組學技術研究炎症及自身免疫性疾病的發病機制；2) 研究藥物作用新靶點；3) 新藥研發。

工作履歷

2023.7-今	澳門科技大學中藥質量研究國家重點實驗室，教授
2016.7-2023.6	澳門科技大學中藥質量研究國家重點實驗室，副教授
2011.9-2016.6	澳門科技大學中藥質量研究國家重點實驗室，助理教授
2010.6-2011.8	香港浸會大學中醫藥學院博士後研究員
2005.9-2006.12	香港浸會大學中醫藥學院，研究助理

講授課程

本 科：藥理學、微生物與免疫學、分子生物學與生物化學、中藥藥理學、中藥藥理學實驗

研究生：藥理學實驗方法及設計

負責承擔的科研項目項目

1. 2024.9-2026.8 ApoC3 蛋白作為多囊卵巢綜合征胰島素抵抗預警標記物的技術研發及臨床應用
(澳門科學技術發展基金-廣東省聯合項目, 項目編號 0043/2024/AGJ, 澳門幣 1,170,000.00, PI)
2. 2023.11-2026.10 靶向 Th17 細胞治療自身免疫性疾病的創新藥物研究
(國家重點研發計畫“政府間國際科技創新合作”, 項目編號 0018/2023/AMJ, 澳門幣 2,064,000, PI)
3. 2022.07-2025.07 融合臨床、單細胞和多組學數據的人工智能技術在結直腸癌的精准診療的研究
(澳門科學技術發展基金, 項目編號 0003/2021/AKP, 澳門幣 7,330,000, Co-PI)
4. 2021.04-2022.04 基於 Spike/ACE2 互作介面探索 019-nCoV 治療策略
(澳門科學技術發展基金, 項目編號 0058/2020/A, 澳門幣 385,000, PI)
5. 2020.09-2022.09 高等院校青年科研人員國際培養專項資助
(澳門科學技術發展基金, 項目編號 011/AIJ/2020, 澳門幣 180,000, PI)
6. 2018.10-2021.11 基於 IKK β knock-in 小鼠研究炎症中蛋白降解的穩態調控機制及藥物作用新靶標
(澳門科學技術發展基金, 項目編號 0017/2018/A1, 澳門幣 2,145,000, PI)
7. 2015.04-2015.12 全自動磁性細胞分選儀 autoMACS Pro
(澳門科學技術發展基金, 項目編號 025/2014/SB, 澳門幣 612,110, PI)
8. 2014.05-2017.04 來源於中藥的小分子化合物基於 ROR γ t 靶標對 Th17 及自身免疫疾病的抑制作用及機理研究
(澳門科學技術發展基金, 項目編號 081/2013/A3, 澳門幣 1,810,400, PI)
9. 2012.05-2014.12 中藥二氫黃酮化合物與地塞米松合用時對免疫器官的保護作用及協同抗炎的機理研究
(澳門科學技術發展基金, 項目編號 065/2011/A3, 澳門幣 1,736,400, PI)
10. 2012.1-2012.12 紫草素通過抑制 IKK β -I κ B α -NF- κ B 及 MAPK 信號轉導通路對 T 細胞活化的研究
(澳門基金會, 項目編號 0213, 澳門幣 53,000.00, PI)

科研獲獎

1. 2023 年中國生物物理學會女科學家優秀科研成果三等獎 (個人獎)
2. 2022 年度澳門特別行政區科學技術獎-自然科學獎二等獎
項目名稱：基於人工智能和多組學的新型冠狀病毒感染的機制和診治的關鍵技術研究
3. 2018 年度國家教育部高等學校科學研究優秀成果獎-自然科學獎一等獎
項目名稱：抑制細胞增殖與分化異常的新機制研究
4. 2017 澳門科技大學中珠醫療生命科學科研一等獎 (個人獎)

5. 2016 澳門科技大學中銀最佳學術研究獎 (個人獎)
6. 2016 年度澳門特別行政區科學技術獎-自然科學獎一等獎
項目名稱：類風濕關節炎的發病新機制和治療新途徑
7. 2014 年度國家教育部高等學校科學研究優秀成果獎-自然科學獎一等獎
項目名稱：中醫藥整體治療的網路調節機理研究

Selected Publications

- 1) Zhenghao Li, Wende Deng, Lanxuan Yang, Changheng Tang, Jian-Min Yue, Olivia Monteiro, and Daniel Baptista-Hon, **Li T**, Lipid metabolism in homeostasis and disease, Signal Transduct Target Ther. *In Press* [IF: 52.70]
- 2) Deng W., **Li T**. Skin as an autonomous immune organ: Antibody production and host protection, Acta Pharm Sin B. 2025 May;15(5):2795-2797[IF: 14.6]
- 3) Deng WD#, Liu JY#, Tang CH#, Li ZH, Qiu Y, Zhou H, Yang LX, **Li T**. Critical role of skin in pathogenesis: bidirectional crosstalk between skin and multiple organs. MedComm - Future Medicine. 2025. 4:e70020 (Cover story, Highlighted by EurekaAlert!)
- 4) Liu F., Zhou H., Wang K., Yu Y., Gao Y., Sun Z., Liu S., Sun S., Zou Z., Li Z., Li B., Miao H., Liu Y., Hou T., Fok M., Patil N. G., Xue K., **Li T**, Oermann E., Yin Y., Zhang K. MetaGP: A generative foundation model integrating electronic health records and multimodal imaging for addressing unmet clinical needs. Cell reports Medicine, 2025; 15(6(4):102056. [IF: 10.6].
- 5) Guo ZY, Tang YQ, Zhang ZB, Liu J, Zhuang YX, **Li T**. COVID-19: from immune response to clinical intervention. Precis Clin Med. 2024 Jul 18;7(3):pbae015. [IF: 5.0]
- 6) Wang MM, Zhao Y, Liu J, Tang Y, Fan R, Guo Z, **Li T**, The role of the cGAS-STING signaling pathway in viral infections, inflammatory and autoimmune diseases. Acta Pharmacol Sin, 2024 Jun 1. [IF: 8.4]
- 7) Wang X, Li J, Chen R, **Li T**, Chen M. Active Ingredients from Chinese Medicine for Combination Cancer Therapy. Int J Biol Sci. 2023 Jul 9;19(11):3499-3525. [IF: 8.2]
- 8) Zhao Y, Jin H, Lei K, Bai LP, Pan H, Wang C, Zhu X, Tang Y, Guo Z, Cai J, **Li T**. Oridonin inhibits inflammation of epithelial cells *via* dual-targeting of CD31 Keap1 to ameliorate acute lung injury. Front Immunol. 2023 Apr 6;14:1163397. [IF: 5.9]
- 9) Zhang Q, Hao S, Li L, Liu M, Huo C, Bao W, Cheng H, Fung H, Wong T, Wu W, Leung P, Wang S, **Li T**, Zhang G, Li M, Zhao Z, Jia W, Bian Z, Mitchison T, Zhang J, Lyu A, Han Q. M cells of mouse and human Peyer's patches mediate the lymphatic absorption of an Astragalus hyperbranched heteroglycan. Carbohydr Polym. 2022 Nov 15;296:119952. [IF: 10.72]
- 10) Wang Y, Deng W, Liu J, Yang Q, Chen Z, Su J, Xu J, Liang Q, **Li T**, Liu L, Li X. IKK β increases neuropilin-2 and promotes the inhibitory function of CD9⁺ Bregs to control allergic diseases. Pharmacol Res. 2022 Nov;185:106517. [IF: 10.5]
- 1) Zhang Q, Li L, Hao S, Liu M, Huo C, Wu J, Liu H, Bao W, Zheng H, Li Z, Cheng H, Fung H, Wong T, Leung P, Wang S, **Li T**, Zhang G, Li M, Zhao Z, Jia W, Bian Z, Mitchison T, Zhang J, Lyu A, Han Q, Sun H. A lymphatic route for a hyperbranched heteroglycan from Radix Astragali to trigger immune responses after oral dosing. Carbohydr Polym. 2022 Sep 15;292:119653. [IF: 10.723]
- 2) Zheng Z, Xu T, Liu Z, Tian W, Jiang ZH, Zhu GY, **Li T**, Gao J, Bai LP. Cryptolepine suppresses

breast adenocarcinoma via inhibition of HIF-1 mediated glycolysis. *Biomed Pharmacother.* 2022 Sep;153:113319. [IF: 7.5]

3) Liu J, Zhuang YX, Wu J, Wu Q, Liu MX, Zhao Y, Liu ZQ, Wang CY, Lu LL, Meng YJ, Lei KW, Li XJ, Wu QB, Leung ELH, Guo ZY, Liu L[#], **Li T[#]**, IKK β mediates homeostatic function in inflammation via competitively phosphorylating AMPK and I κ B α . *Acta Pharm Sin B.* 2022 Feb;12(2):651-664. (#corresponding author, cover story) [IF: 14.8]

4) Xiao RP, Lei KW, Kuok HH, Deng WD, Zhuang YX, Tang YQ, Guo ZY, Qin HY[#], Bai L-P[#], **Li T[#]**, Synthesis and identification of lithocholic acid 3-sulfate as ROR γ t ligand to inhibit Th17 cell differentiation. *J Leukoc Biol.* 2022 Feb 21. doi: 10.1002. (#corresponding author) [IF: 3.1]

5) Ge ZP, Fan YY, Deng WD, Zheng CY, **Li T**, Yue JM. Cephalodiones A-D: Compound Characterization and Semisynthesis by [6+6] Cycloaddition. *Angew Chem Int Ed Engl.* 2021 Feb 2. doi: 10.1002/anie.202015332. [IF: 16.823]

6) Liao K, Su X, Lei K, Liu Z, Lu L, Wu Q, Pan H, Huang Q, Zhao Y, Wang M, Cai J, Liu L[#], **Li T[#]**. Sinomenine protects bone from destruction to ameliorate arthritis via activating p62Thr269/Ser272-Keap1-Nrf2 feedback loop. *Biomed Pharmacother.* 2021 Jan 1;135:111195. (#co-corresponding author) [IF: 7.5]

7) Huang X, Cai H, Zhou H, **Li T**, Jin H, Evans CE, Cai J, Pi J. Cobalt oxide nanoparticle-synergized protein degradation and phototherapy for enhanced anticancer therapeutics. *Acta Biomater.* 2021 Feb;121:605-620. [IF: 10.633]

8) Ji KL, Fan YY, Kuok HH, Liu QF, **Li T**, and Jian-Min Yue, Macrocyclic Nonapeptides Incorporating Uncharacterized Amino Acids with Inhibitory Effects on Th17 Differentiation. *CCS Chemistry.* 2020, 3 (2): 844-858. [IF: 9.2]

9) Zou B*, Zhang Y*, **Li T***, Liu J, Deng W, Tan Y, Yang Q, Ding Z, Liao K, Xu J, Pan H, Li X, Liu L. A mutation of cysteine 46 in IKK- β promotes mPGES-1 and caveolin-1 expression to exacerbate osteoclast differentiation and osteolysis. *Biochem Pharmacol.* 2019 Dec 13;113:762. (*co-first author). [IF: 5.6]

10) Chen Q, Liu J, Zhuang Y, Bai LP, Yuan Q, Zheng S, Liao K, Khan MA, Wu Q, Luo C, Liang L, Wang H, **Li T[#]**. Identification of an IKK β inhibitor for inhibition of inflammation in vivo and in vitro. *Pharmacol Res.* 2019 Aug 31;104:440. (#co-corresponding author). . (#co-corresponding author). [IF: 10.5, ranked 13rd in 352 journals (3.6%) of category PHARMACOLOGY & PHARMACY]

11) Pan H, Guo R, Ju Y, Wang Q, Zhu J, Xie Y, Zheng Y, **Li T**, Liu Z, Lu L, Li F, Tong B, Xiao L, Xu X, Leung EL, Li R, Yang H, Wang J, Zhou H, Jia H, Liu L. A single bacterium restores the microbiome dysbiosis to protect bones from destruction in a rat model of rheumatoid arthritis. *Microbiome.* 2019 Jul 17;7(1):107. [IF: 11.6]

12) Liu J, Bai LP, Yang F, Yao XJ, Lei K, Lam, Christopher Wai Kei; Wu QB, Zhuang YX, Xiao RP, Liao KS, Kuok HH, **Li T[#]**, Liu L[#]. Potent antagonists of ROR γ t, cardenolides from *Calotropis gigantea*, exhibit discrepant effects on the differentiation of T lymphocyte subsets. (#co-corresponding author). *Mol Pharm.* 2019 Feb 4;16(2):798-807. (#co-corresponding author). [IF: 4.5]

13) **Li T***, Yan F*, Meng X, Wang J, Ting Kam RK, Zeng X, Liu Z, Zhou H, Yang F, Ren R, Liao K, Liu L. Improvement of glucocorticoid-impaired thymus function by dihydromyricetin via up-regulation of PPAR γ -associated fatty acid metabolism. *Pharmacol Res.* 2018 Nov;137:76-88. (*co-first author). . [IF: 10.5, ranked 13rd in 352 journals (3.6%) of category PHARMACOLOGY & PHARMACY]

14) Yang F Su X, Pi J, Liao K, Zhou H, Sun Y, Liu J, Guo X, Jiang J, Jin H, Cai J, **Li T[#]**, Liu L[#], Atomic force microscopy technique used for assessment of the anti-arthritis effect of licochalcone A

via suppressing NF- κ B activation, *Biomed Pharmacother.* 2018 Jul;103:1592-1601. (#co-corresponding author). [IF: 7.5, ranked 19th in 352 journals (5.3%) of category PHARMACOLOGY & PHARMACY]

15) Su X*, **Li T***, Liu Z, Huang Q, Liao K, Ren R, Lu L, Qi X, Wang M, Chen J, Zhou H, Leung EL, Pan H, Liu J, Wang H, Huang L, Liu L. Licochalcone A activates Keap1-Nrf2 signaling to suppresses arthritis via phosphorylation of p62 at serine 349. *Free Radic Biol Med.* 2017 Dec 9. pii: S0891-5849(17)31236-4. (*co-first author). [IF: 8.2]

16) Jin H, Pi J, Zhao Y, Jiang J, **Li T**, Zeng X, Yang P, Evans CE, Cai J. EGFR-targeting PLGA-PEG nanoparticles as a curcumin delivery system for breast cancer therapy. *Nanoscale.* 2017 Nov 2;9(42):16365-16374. [IF: 7.2]

17) Huang L.F., Dong Y., Wu J. L., Wang P.X., Zhou H., **Li T[#]** and Liu L[#], Sinomenine-induced histamine release-like anaphylactoid reactions are blocked by tranilast via inhibiting NF- κ B signaling. *Pharmacol Res.* 2017 Nov;125(Pt B):150-160. (#co-corresponding author). [IF: 10.5]

18) Chen Y. N., Li H. F., Li M. F., Niu S., B., Wang J. X., Shao H., W., **Li T[#]**, Wang H[#]. Salvia miltiorrhiza polysaccharide activates T Lymphocytes of cancer patients through activation of TLRs mediated -MAPK and -NF- κ B signaling pathways. *Journal of Ethnopharmacology.* 2017 Feb 20. pii: S0378-8741(16)31471-4. (#co-corresponding author) [IF: 5.4]

19) Pan H, Li R, **Li T**, Wang J, Liu L, Whether Probiotic Supplementation Benefits Rheumatoid Arthritis Patients: A Systematic Review and Meta-Analysis. *Engineering.* 2017 February, 3 (1):115-121. [IF: 11.6]

20) Su X, Huang Q, Chen J, Wang M, Pan H, Wang R, Zhou H, Zhou Z, Liu J, Yang F, **Li T[#]**, Liu L[#] Calycosin suppresses expression of pro-inflammatory cytokines via the activation of p62/Nrf2-linked heme oxygenase 1 in rheumatoid arthritis synovial fibroblasts. *Pharmacol Res.* 2016 Nov;113 (Pt A):695-704. (#co-corresponding author). [IF: 10.5]

21) Huang LF, Pi J, Wu JL, Zhou H, Cai JY, **Li T[#]**, Liu L[#], A rapid and sensitive assay based on particle analysis for cell degranulation detection in basophils and mast cells. *Pharmacol Res.* 2016 Jun 21;111:374-383. (#co-corresponding author). . (#co-corresponding author). [IF: 10.5, ranked 13rd in 352 journals (3.6%) of category PHARMACOLOGY & PHARMACY]

22) Zhang X, Zhang D, Jia H, Feng Q, Wang D, Liang D, Wu X, Li J, Tang L, Li Y, Lan Z, Chen B, Li Y, Zhong H, Xie H, Jie Z, Chen W, Tang S, Xu X, Wang X, Cai X, Liu S, Xia Y, Li J, Qiao X, Al-Aama JY, Chen H, Wang L, Wu QJ, Zhang F, Zheng W, Li Y, Zhang M, Luo G, Xue W, Xiao L, Li J, Chen W, Xu X, Yin Y, Yang H, Wang J, Kristiansen K, Liu L, **Li T**, Huang Q, Li Y, Wang J. The oral and gut microbiomes are perturbed in rheumatoid arthritis and partly normalized after treatment. *Nat Med.* 2015 Aug;21(8):895-905. [IF: 50.0]

23) Wang R, Zhang CY, Bai LP, Pan HD, Shu LM, Kong AN, Leung EL, Liu L[#], **Li T[#]**. Flavonoids derived from liquorice suppress murine macrophage activation by up-regulating heme oxygenase-1 independent of Nrf2 activation. *Int Immunopharmacol.* 2015 Oct;28(2):917-24. (#co-corresponding author). [IF: 4.7, ranked 54th in 352 journals (15.2%) of category PHARMACOLOGY & PHARMACY]

24) Leung EL, Wong VK, Jiang ZH, **Li T**, Liu L. Integrated network-based medicine: the role of traditional Chinese medicine in developing a new generation of medicine. *Science.* 2014 Dec, 346 (6216 Suppl), S16-S18. [IF: 45.8]

25) Wong VK*, **Li T***, Law BY, Ma ED, Yip NC, Michelangeli F, Law CK, Zhang MM, Lam KY, Chan PL and Liu L. Saikosaponin-d, a novel SERCA inhibitor induces autophagic cell death in apoptosis-defective cells. *Cell Death Dis.* 2013 Jul 11;4(7):e720. (*co-first author). [IF: 9.6]