

HuDAN PAN



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Teaching Modules: Internal Medicine of Traditional Chinese Medicine; Surgery of Traditional Chinese Medicine

Research Areas: Chinese-Western integrated medicine; Clinical immunology; Diagnosis and Treatment of Rheumatic Diseases by Chinese medicine

Dr. Pan serves as an assistant professor at State Key Laboratory of Quality Research in Chinese Medicine since 2019. She received her bachelor and master degree from Beijing university of Chinese medicine in Traditional Chinese Medicine (Integration of Chinese and Western Medicine). At 2017, Dr. Pan got her doctor degree of Philosophy from Macau University of science and technology and went on for post-doctoral research for 1 year. The research interest for Dr. Pan is the diagnosis and treatment of rheumatic diseases by Chinese medicine. She participated several research programs in recent years in rheumatology and more than 20 articles were published in SCI journals including Microbiome, Annals of the Rheumatic Diseases, Pharmacology & Therapeutics, Phytomedicine and Engineering. She is also the Editorial Board Member of the renowned SCI journal “Pharmacological Research”, “Engineering” and “Phytomedicine”.

Academic Qualifications

2014–2017 Doctor degree of Philosophy in Integrated Chinese and Western Medicine /
Faculty of Chinese Medicine / Macau University of Science and Technology

2007–2014 Bachelor and Master degree / School of Basic Medical Science / Beijing
University of Chinese Medicine

Working Experiences

2019- Assistant Professor / State Key Laboratory of Quality Research in Chinese
Medicine / Macau University of science and technology

2017–2019 Post-doctoral Research Fellow / Director of State Key Laboratory of Quality
Research in Chinese Medicine / Macau University of science and technology

Publications:

Selected articles published in SCI journals in the recent past years: (Corresponding author;
#Contribution equally)*

1. **HD Pan[#]**, RJ Guo[#], YM Ju[#], Q Wang[#], Jie Zhu, Ying Xie, YF Zheng, T Li, ZQ Liu, LL Lu, F Li, B Tong, L Xiao, X Xu, Elaine LH Leung, RZ Li, HM Yang, J Wang, H Zhou, HJ Jia*, Liang Liu*. 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.
2. **Pan HD**, Yao XJ, Wang WY, Lau HY, Liu L*. Network pharmacological approach for elucidating the mechanisms of traditional Chinese medicine in treating COVID-19 patients. *Pharmacol Res*. 2020 Jun 20;159:105043.
3. XX Fan[#], **HD Pan[#]**, Y Li, RJ Guo, Elaine Leung*, L Liu*. Novel therapeutic strategy for cancer and autoimmune conditions: Modulating cell metabolism and redox capacity. *Pharmacol Ther*. 2018 Nov;191:148-161.
4. **HD Pan[#]**, Y Xiao[#], WY Wang, RT Ren, Elaine LH Leung*, L Liu*. Traditional Chinese Medicine as a Treatment for Rheumatoid Arthritis: From Empirical Practice to Evidence-based Therapy. *Engineering*. doi: org/10.1016/j.eng.2019.01.018.
5. **Pan H[#]**, Guo R[#], Zhu J[#], Wang Q[#], Ju Y, Xie Y, Zheng Y, Wang Z, Li T, Liu Z, Lu L, Li F, Tong B, Xiao L, Xu X, Li R, Yuan Z, Yang H, Wang J, Kristiansen K, Jia H*, Liu L*. A gene

- catalogue of the Sprague-Dawley rat gut metagenome. *Gigascience*. 2018 May 1;7(5).
6. **Pan, H.**, Li, R., Li, T., Wang, J., Liu, L*. Whether Probiotic Supplementation Benefits Rheumatoid Arthritis Patients: A Systematic Review and Meta-Analysis. *Engineering*, 115-121, doi:10.1016/j.eng.2017.01.006.
 7. **HD Pan[#]**, YF Zheng, ZQ Liu, ZW Yuan, RT Ren, H Zhou, Y Xie*, L Liu*. Deciphering the pharmacological mechanism of Guan-Jie-Kang in treating rat adjuvant-induced arthritis using omics analysis. *Front Med*. 2019 May 14. doi: 10.1007/s11684-018-0676-2.
 8. 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*. 2020 Feb;172:113762.
 9. Hu F, Jiang X, Guo C, Li Y, Chen S, Zhang W, Du Y, Wang P, Zheng X, Fang X, Li X, Song J, Xie Y, Huang F, Xue J, Bai M, Jia Y, Liu X, Ren L, Zhang X, Guo J, **Pan H**, Su Y, Yi H, Ye H, Zuo D, Li J, Wu H, Wang Y, Li R, Liu L*, Wang XY*, Li Z*. Scavenger receptor-A is a biomarker and effector of rheumatoid arthritis: A large-scale multicenter study. *Nat Commun*. 2020 Apr 20;11(1):1911.
 10. Zhang N, Zhang H, Law BYK, Dias IRSR, Qiu CL, Zeng W, **Pan HD**, Chen JY, Bai YF, Lv J, Qu LQ, Chen X, Huang Q, Zhang W, Yang LJ, Yu L, Han Y, Huang GX, Wang HM, Sun XL, Zhang Y, He HQ, Dan Luo W, Xiao Y, Zhou J, Xu T, Huang QC, Wu M, Huang ZS, Liu W, Wong VKW*, Liu L*. Sirtuin 5 deficiency increases disease severity in rats with adjuvant-induced arthritis. *Cell Mol Immunol*. 2020 Feb 25.
 11. Wong VKW, Qiu C, Xu SW, Law BYK, Zeng W, Wang H, Michelangeli F, Dias IRSR, Qu YQ, Chan TW, Han Y, Zhang N, Mok SWF, Chen X, Yu L, **Pan H**, Hamdoun S, Efferth T, Yu WJ, Zhang W, Li Z, Xie Y, Luo R, Jiang Q, Liu L*. Ca²⁺ signalling plays a role in celastrol-mediated suppression of synovial fibroblasts of rheumatoid arthritis patients

- and experimental arthritis in rats. *Br J Pharmacol*. 2019 Aug;176(16):2922-2944.
12. Wang J[#], Wang C[#], Liang Y, **Pan H**, Jiang Z, Li Z, Li Y, Xia L, Liu W, Zhang X, Liu Z, Jiang M, Liu J, Zhou H, Liu L*. Serum IgG N-glycans act as novel serum biomarkers of ankylosing spondylitis. *Ann Rheum Dis*. 2018 Nov 15. pii: annrheumdis-2018-213815. doi: 10.1136/annrheumdis-2018-213815.
 13. Li RZ, Fan XX, Duan FG, Jiang ZB, **Pan HD**, Luo LX, Zhou YL, Li Y, YaoXJ, Leung EL*, Liu L*. Proscillaridin A induces apoptosis and suppresses non-small-cell lung cancer tumor growth via calcium-induced DR4 upregulation. *Cell Death Dis*. 2018 Jun 13;9(6):696.
 14. RY Huang, **HD Pan**, JQ Wu, H Zhou, ZG Li, P Qiu, YY Zhou, XM Chen, ZX Xie, Y Xiao, QC Huang*, L Liu*. Comparison of combination therapy with methotrexate and sinomenine or leflunomide for active rheumatoid arthritis: a randomized controlled clinical trial. *Phytomedicine*. 2019 Apr;57:403-410.
 15. **HD Pan**, XL Qi, L Wang, JY He, JL Liu, YB Zhang, Y Tian, XW Duan, HY Yang, YP Bai*. Whether Fire-needle Therapy Benefits Plaque Psoriasis: A Multicenter, Randomized, and Controlled Trial. *Chin J Integr Med*. 2019 Apr;25(4):259-263.
 16. 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 HD**, 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. doi: 10.1016 / j.freeradbiomed. 2017.12.004.
 17. Li Y[#], Leung EL[#], **Pan HD**, Yao XJ, Huang QC, Wu M, Xu T, Wang YW, Cai J, Li RZ, Liu W and Liu L*. Identification of Potential Genetic Causal Variants for Rheumatoid Arthritis by Whole-Exome Sequencing. *Oncotarget*. 2017
 18. Wang MF[#], Li RZ[#], Li Y, Cheng XQ, Yang J, Chen W, Fan XX, **Pan HD**, Yao XJ, RT, XQ, Liu L*, Leung EL* & Tang YJ*. *J Thorac Dis*. Clinical statistics analysis on the characteristics of pneumoconiosis of Chinese miner population. 2016, 8(8): 2203-2211.

19. Wang MF, Li RZ, Li Y, Cheng XQ, Yang J, Chen W, Fan XX, **Pan HD**, Yao XJ, Ren T, Qian X, Liu L, Leung EL* , Tang YJ * . Clinical statistics analysis on the characteristics of pneumoconiosis of Chinese miner population. *J Thorac Dis.* 2016 Aug; 8(8):2203-11.
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.* vol. 113, Part A, pp. 695 –704, 2016.
21. 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.

Patent awarded and filed:

1. Methods of identifying a gene associated with a disease or pathological condition of the disease. Liu L, Leung EL, Yao XJ, Li Y and **Pan HD**.(US Patent No. 15/647,414 filed on 12 July 2017; Australia patent awarded for 8 year-2017100960)
2. An oral liquid probiotic formulation and method of preventing and/or treating arthritis. Liu L; **Pan HD**; Zheng YF and Li RZ. (Australia patent awarded for 8 year- 2017100632)
3. LIU Liang, PAN Hu-Dan, WANG Jing-Rong, WANG Can-Jian, LIANG Yong. Method of diagnosing systemic lupus erythematosus. (系统性红斑狼疮诊断方法).AUS 2019101124. 2019/09/27.

Awards & Special Honors:

1. **Best Paper Award.** The 10th International Forum on Rheumatoid Arthritis (IFRA 2018)
2. **Best TCM Conference Abstract Award.** The 6th Annual Meeting of Specialty Committee on

Immunology of Traditional Chinese Medicine of the World Federation of China Immunology Society

Membership and community services:

1. Council Member of the Chinese Medicine and Immunology Association, World Federation of China Immunology Society, 2018 - Present (B06218110151)
2. Council Member of the 1th Board of Specialty Committee of Chinese Medicine Healthcare Products of World Federation of China Immunology Society, 2015-Present
3. Council member of the First Council for Macau International Collaboration Alliance for Rheumatology Research.