

Curriculum Vitae

Shengpeng Wang 王勝鵬, Ph.D

Associate Professor

Deputy Director, Macao Center for research in Chinese Medicine

Assistant Director, State Key Laboratory of Mechanism and Quality of Chinese Medicine

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Education & Work Experiences

Aug. 2025 - present, Associate Professor

State Key Laboratory of Quality Research in Chinese Medicine, Institute of Chinese Medical Sciences, University of Macau, Macao, China

Feb. 2019 – Aug 2025, Assistant Professor

State Key Laboratory of Quality Research in Chinese Medicine, Institute of Chinese Medical Sciences, University of Macau, Macao, China

Nov. 2016 - Jan. 2019, Postdoctoral Fellow

State Key Laboratory of Quality Research in Chinese Medicine, Institute of Chinese Medical Sciences, University of Macau, Macao, China

Sino-Dutch Centre for Preventive and Personalized Medicine, Leiden University, Leiden, the Netherlands

Aug. 2010 - Aug. 2016, Ph.D. in Biomedical Sciences

State Key Laboratory of Quality Research in Chinese Medicine, Institute of Chinese Medical Sciences, University of Macau, Macao, China

Sep. 2006 - Jun. 2010, B.S. in Chinese Materia Medica (National Basic Scientific Research & Teaching Personnel Training Base)

College of Pharmacy, Chengdu University of Traditional Chinese Medicine, Chengdu, China

Research Interests

1. Structure-activity relationship of natural polysaccharides
2. Development of novel drugs of Chinese medicine

Academic Services

1. Board member, International Society for Chinese Medicine
2. Youth Editorial Member of *Chinese Medicine, Acupuncture and Herbal Medicine* and *Journal of Pharmaceutical Analysis*.
3. Member of International Natural Product Sciences Taskforce (2017-).
4. Ad-hoc reviewer of more than 40 peer-reviewed academic journals, including *Adv Drug Deli Rev, J Adv Res, Adv Sci, Gut Micro, Int J Biol Macromol, J Ethnopharm, Phytomedicine, Food Chem Toxicol*, etc.

Honors and Awards

1. National 'Qi-Huang' Young Scholar, The State Administration of Traditional Chinese Medicine, 2025
2. Highly Cited Researcher (Cross field), Clarivate, 2023
3. World's Top 2% Scientists (Career and single-year impact), 2020-2025
4. Young Elite Scientists Sponsorship Program, Chinese Association of Chinese Medicine, 2022
5. China Youth Science and Technology Innovation Award, Beijing, China, 2014 (The 1st university student from Macao to receive the award)
6. Macau Science and Technology Award for Postgraduate, Macau SAR, 2014
7. Excellent Paper Award, International conference on modernization of Chinese medicine, Chengdu, China, 2013
8. Macau Science and Technology Award for Postgraduate, Macau SAR, 2012
9. Excellent Poster Award, Chinese Pharmaceutic Conference, Changsha, China, 2014
10. Representative of Macau at Global Young Scientists Summit, Singapore, 2017
11. Gold award, 47th International Exhibition of Inventions of Geneva, Switzerland, 2019
12. International Award for Contribution to Chinese Medicine-1st **Grade** Achievement Award in Medical Science, China, 2020

Selected Publications

(Total SCI papers: **200**, h-Index: **55**, total citations: **11,200**, *corresponding author)

1. Xiao YQ, Li X, Fang YY, Guo M, Shui M, Zhong G, Zhou HF, Lin C, Sun BF*, **Wang SP***. Berberine suppresses colon inflammation via integrated modulation of host metabolism, microbial ecology, and innate immune signaling. *Theranostics*. 2026, 16 (4):2019-2036.
2. Shui M, Chen Y, Guo M, Zhong G, Li H, Xiao Y, Yuan Q, Yuan B, Liu X, Zhou H, Chen Z*, **Wang SP***. Screening of sinapic acid as a polyphenol stabilizing agent for enhanced miR-124 delivery in ulcerative colitis therapy. *Journal of Controlled Release*.

2026, 390:114503.

3. Xiao Y, Zhao Q, Ni D, Zhang X, Hao W, Yuan Q, Xu W, Mu W, Wu D, Wu X*, **Wang SP***. Polymerization of dietary fructans differentially affects interactions among intestinal microbiota of colitis mice. *ISME J.* 2025, 19(1):wrae262.
4. Wang X, Zhang G, Bian Z, Chow V, Grimaldi M, Carivenc C, Sirounian S, Li H, Sladekova L, Mott S, Luperi Y, Gong Y, Costello C, Li L, Jachimowicz M, Guo M, Hu S, Wilson D, Balaguer P, Bourguet W, Mani S, Bonati L, Peng H, March J, Wang H, **Wang SP***, Krause HM*, Liu JB*. An abundant ginger compound furanodienone alleviates gut inflammation via the xenobiotic nuclear receptor PXR in mice. *Nature Communications.* 2025, 16(1):1280.
5. Yuan Q, Liu W, Hao W, Chen Y, Xiao YQ, Li HY, Shui MJ, Wu DT*, **Wang SP***. Glycosidic linkages of fungus polysaccharides influence the anti-inflammatory activity in mice. *Journal of Advanced Research.* 2025, 67:161-172 (*Highly Cited Paper*).
6. Chen Y, Shui MJ, Li HY, Guo M, Yuan Q, Wang T, Zhou HF, Chen ZJ*, **Wang SP***. Inflammation-Targeted Delivery of Probiotics for Alleviation of Colitis and Associated Cognitive Disorders through Improved Vitality and Colonization. *Biomaterials.* 2025, 318:123163.
7. Yuan Q, Liu W, Wu H, Yang X, Li H, Chen Y, Shui M, Ding Y, **Wang SP***. Fructans with various molecular weights from *Polygonatum cyrtoneura* Hua differentially ameliorate intestinal inflammation by regulating the gut microbiota and maintaining intestinal barrier. *International Journal of Biological Macromolecules.* 2025 Jan;285:138359.
8. Xu Y, Chen Z, Hao W, Yang Z, Farag M, Vong CT, Wang Y, **Wang SP***. Berberine and magnolol exert cooperative effects on ulcerative colitis in mice by self-assembling into carrier-free nanostructures. *Journal of Nanobiotechnology.* 2024, 22(1):538 (*Annual Paper*).
9. Chen ZJ, Chen Y, Hao W, Shui MJ, Zhang JM, Zhang C, Wang YT*, **Wang SP***. Oral Delivery of Transformable Bilirubin Self-Assembled System for Targeted Therapy of Colitis. *Advanced Healthcare Materials.* 2023, 12(26):e2300946.
10. LI HY, Wang Y, Shao SM, Yu H, Wang DQ, Li CY, Yuan Q, Liu W, Cao JL, Wang XJ, Guo HB, Wu X*, **Wang SP***. *Rabdosia serra* alleviates DSS-induced colitis in mice through anti-inflammation, regulating Th17/Treg balance, maintaining intestinal barrier integrity and modulating gut microbiome. *Journal of Pharmaceutical Analysis.* 2022. 12(6):824-838.
11. Gao CF, Zhou YY, Chen ZJ, Hao W, LI HY, Wang YT*, **Wang SP***. Turmeric-derived nanovesicles as novel nanobiologics for targeted therapy of ulcerative colitis. *Theranostics.* 2022, 12(12): 5596-5614. (*Highly Cited Paper*)
12. Chen ZJ, Hao W, Gao CF, Zhou YY, Zhang JM, Wang YT*, **Wang SP***. A polyphenol-assisted IL-10 mRNA delivery system for ulcerative colitis. *Acta Pharmaceutica Sinica*

- B. 2022. 12(8):3367-3382.
13. Chen SY, Chen ZJ, Wang Y, Hao W, Yuan Q, Zhou HF, Gao CF, Wang YT, Wu X, **Wang SP***, Targeted delivery of Chinese herb pair-based berberine/tannin acid self-assemblies for the treatment of ulcerative colitis. *Journal of Advanced Research*. 2022, 40:263-276.
 14. Zhou YY, Gao C, Vong C. T, Tao H, Li H, **Wang SP*** & Wang YT*. Rhein regulates redox-mediated activation of NLRP3 inflammasomes in intestinal inflammation through macrophage-activated crosstalk. *British Journal of Pharmacology*, 2021, 179(9):1978-1997.
 15. Chen ZJ, M. Farag, Zhang C, Yang Y, **Wang SP***, Wang YT*. Multifaceted role of phyto-derived polyphenols in nanodrug delivery systems. *Advanced Drug Delivery Reviews*. 2021, 176:113870. (*Highly Cited Paper*)
 16. Wang Y, Tao H, Huang H, Xiao Y, Wu X, Li M, Cho CH, Wang YT, **Wang SP***, Wu X*. Dietary supplement *Rhodiola crenulata* extract alleviates dextran sulfate sodium-induced colitis in mice through anti-inflammation, mediating gut barrier integrity and reshaping gut microbiome. *Food & Function*, 2021, 12(7):3142-3158.
 17. Wu X, Li MX, Xiao ZG, Daglia M, Dragan S, Delmas D, Vong CT, Wang YT, Wang MF, Sun CD, **Wang SP***, Xiao JB* et al. Natural Polyphenols for Cancer Therapy: What Have We Ignored? *Trends in Food Science and Technology*, 2020, 101, 150-164.
 18. Yin J, Ren W, Wei B, Huang H, Li MX, Cho CH, **Wang SP***, Xu Wu*. Characterization of Chemical Composition and Prebiotic Effect of a Dietary Medicinal Plant *Penthorum Chinense* Pursh. *Food Chemistry*. 2020, 319, 126568.
 19. **Wang SP**[#], Zhang J[#], Wang YT*, Chen MW*. Hyaluronic acid-coated PEI-PLGA nanoparticles mediated co-delivery of doxorubicin and miR-542-3p for triple negative breast cancer therapy. *Nanomedicine: NMB*. 2016, 12(2):411-420.
 20. **Wang SP**, Qiu J, Shi Z, Wang YT, Chen MW*. Nanoscale drug delivery for taxanes based on the mechanism of multidrug resistance of cancer. *Biotechnology Advances*. 2015, 33(1):224-241.

Book Chapters

1. **Wang SP**, Chen MW, Zhou Q, Chan HK. Novel formulations and drug delivery systems for phytotherapies. In: *Phytotherapies: Efficacy, Safety and Regulation*. Iqbal Ramzan ed., *John Wiley & Sons, Inc.*, 2014. (ISBN: 978-1-118-26806-3).
2. **Wang SP**, Gong J, Chen MW. Novel drug delivery systems for Chinese medicine. In: *Modern technology and progress on anti-tumor Chinese medicine*. YT Wang ed., *People's Medical Publishing House*, Beijing, 2012. (ISBN: 978-7-117-16227-2).