

Education

- 2024.5- **Visiting scholar** , *National University of Singapore*, Singapore, Singapore
2024.10 Bioinformatics & AI, Structure biology
2020.9- **PhD Student**, *Tsinghua University*, Beijing, China
present Bioinformatics & AI
2018.3- **Exchange Student**, *Shanghai Jiao Tong University*, Shanghai, China
2018.8 Automation
2016.9- **Bachelor's Degree**, *Harbin Institute of Technology*, Harbin, China
2020.8 Automation

Publications

- 2023 **Exploring the effect of Weifuchun capsule on the toll-like receptor pathway mediated HES6 and immune regulation against chronic atrophic gastritis**
Wang B#, Zhou W#, Zhang H#, Wang W, Zhang B, Li S*.
Journal of Ethnopharmacology, 2023 Mar 1; 303:115930. (IF=5.4, published)
- 2023 **Uncovering the mechanisms of Yi Qi Tong Qiao Pill in the treatment of allergic rhinitis based on Network target analysis**
Wang B, Zhang D, Zhang T, Sutcharitchan C, Hua J, Hua D*, Zhang B*, Li S*.
Chinese Medicine, 2023 Jul 24; 18(1):88. (IF=4.9, published)
- 2024 **Biological mechanism of Traditional Chinese Medicine Formula and Herbs in Treating Diseases from the perspective of Cold and Hot**
Wang B, Chen P, Zhang P, Li S*.
World Journal of Traditional Chinese Medicine, February 29, 2024.
10.4103/wjtc.wjtc_41_23. (IF=4.4, published)
- 2023 **Network-based cancer precision prevention with artificial intelligence and multi-omics**
Zhang P, **Wang B**, Li S*.
Science Bulletin (Beijing), 2023 Jun 30; 68(12):1219-1222. (IF=18.9, published)
- 2023 **Network pharmacology: towards the artificial intelligence-based precision traditional Chinese medicine**
Zhang P#, Zhang D#, Zhou W#, Wang L, **Wang B**, Zhang T, Li S*.
Briefings in Bioinformatics, 2023 Nov 22; 25(1):bbad518. (IF=9.5, published)
- 2024 **Cold and Hot syndromes in traditional Chinese medicine: Insights from the perspective of immunometabolic homeostasis**
Chen P, **Wang B**, Zhang P, Li S*.
World Journal of Traditional Chinese Medicine, March 05, 2024.
10.4103/wjtc.wjtc_53_23. (IF=4.4, published)
- 2022 **Network Target Theory, Key Techniques and Applications in Traditional Chinese Medicine**
Shao Li*, Peng Zhang, Xin Wang, Bo Zhang, **Boyang Wang**.
Modernization of Traditional Chinese Medicine and Materia Medica-World Science and Technology, 2022 (09), 3261-3269. (cover paper, published)

- 2023 **Research and development practice of traditional Chinese medicine based on network target theory and technology**
Shao Li*, Boyang Wang, et al.
China Journal of Chinese Materia Medica, 2023, 48(22):5965-5976. (cover paper, published)

Works In Progress

- Gao Z#, Wang B#, et al. **Uncovering the metabolic reprogramming of macrophages for Gegen Qinlian Decoction in alleviating meta-inflammation of T2DM.**
(Signal Transduction and Targeted Therapy, in revision)
- Fan Q#, Wu C#, Du Y#, Wang B#, et al. **Comparison of Jinzhen Oral Liquid and Ambroxol Hydrochloride and Clenbuterol Hydrochloride Oral Solution in the Treatment of Acute Bronchitis in Children: A Multicenter, Non-inferiority, Prospective, Randomized Controlled trial.**
(Acta Pharmaceutica Sinica B, in revision)
- Zhao W#, Wang B#, et al. **Clinical multi-omics reveals the role of Tuomin Zhiti Decoction Intervention in Allergic Rhinitis from the perspective of biological network.**
(Phytomedicine, under review)
- Wang B#, Xiao L#, et al. **Uncovering the mechanism of traditional Chinese medicine in treating gastritis based on the classification of Cold and Hot ZHENG.**
(Chinese Medicine, under review)
- Wang B#, Zhang T#, Zhang D, et al. **A Phenotype-Molecular Transfer Learning Model: Clinical Analysis and Mechanistic Insights of Yinqiao Qingre Pill in Wind-Heat Cold Intervention**
(Briefings in Bioinformatics, under review)
- Liu Q#, Wang B#, Chen Z#, et al. **Leveraging Network Target Theory for Efficient Prediction of Drug-Disease Interactions: A Few-shot Learning Approach.**
(Briefings in Bioinformatics, under review)
- Zhong C#, Guo S#, Liu Q#, Sun D#, Wang B#, et al. **A computational based new treatment strategy with randomized, double-blind, three-armed, parallel-controlled, multicenter clinical trials on Mycoplasma pneumoniae pneumonia in children.**
(Chinese Medical Journal, under review)
- Wang B#, Liu Q#, Zhang T#, et al. **Elucidate the Role of Artificial Intelligence in Drug Development from the Perspective of Drug-Target interactions.**
(Journal of Pharmaceutical Analysis, under review)
- Wang B#, Chen P#, Zhao W, et al. **Regulation of Cell Cycle by Pien Tze Huang in preventing Hepatocellular carcinoma progression.**
(Phytomedicine, under review)
- Zhao W, Wang B, Li S. **Network Pharmacology for Traditional Chinese Medicine in the Era of Artificial Intelligence.**
(Chinese Herbal Medicine, under review)

Preprints

- 2023 **A network-based biomarkers discovery of Cold/Hot ZHENG chronic gastritis and Cold/Hot herbs of formulae**
Wang B, Chen P, Zhang P, Li S.
arXiv:2302.05450 (2023).

- 2024 **Network pharmacology on the mechanism of Yi Qi Tong Qiao Pill inhibiting allergic rhinitis**
Wang B, Zhang D, Zhang T, Sutcharitchan C, Hua J, Hua D*, Zhang B*, Li S*. *arXiv:2305.04931* (2023).
- 2024 **Clinical multi-omics reveals the role of Tuomin Zhiti Decoction Intervention in Allergic Rhinitis from the perspective of biological network**
Zhao W#, Wang B#, Kong L, Wang Q, Li S. *medRxiv 2024.03.10.24303911* (2024).
- 2024 **Capsaicin acts as a novel NRF2 agonist to suppress ethanol induced gastric mucosa oxidative damage by directly disrupting the KEAP1-NRF2 interaction**
Gao X, Zhang B, Liu P, Yuwen M, Liu Z, Tan R, Wang B, Liu K, Yang Z, Ba J, Bai X, Shama S, Tang C, Liu L, Zhu C, Wang T, Li S, Kang J. *bioRxiv 2024.01.06.574490* (2024).
- 2024 **The regulatory role of JZOL on TRP channels in the treatment of Acute Bronchitis based on the combination of clinical trials, computational analysis and in vivo experiments**
Qinhua Fan#, Chongming Wu#, Yawei Du#, Boyang Wang#, et al. *medRxiv, 2024.05.07.24306993* (2024).
- 2024 **Unveil the mechanism of Jinzhen Oral Liquid combined with Azithromycin in the treatment of Mycoplasma pneumoniae pneumonia based on Network pharmacology and clinical trials**
Chengliang Zhong#, Shengxuan Guo#, Qingyuan Liu#, Deyang Sun#, Boyang Wang#, et al. *medRxiv, 2024.06.27.24309347* (2024).

Awards and Honors

- 2024 Highest prize in 49th International Exhibition of Inventions Geneva (**Gold with congratulations of the Jury**, the 3rd author)
- 2024 Jiukun Scholarship 2nd Prize in Tsinghua University
- 2020 National Scholarship in HIT
- 2020 Outstanding Graduate in HIT
- 2018–2020 People's Scholarship 1st Prize in HIT (4 times)
- 2019 "AVIC" 2nd Class Scholarship in HIT
- 2017 College Student Science and Technology Innovation Project 1st Prize in HIT
- 2020 Merit Student in HIT
- 2020 Outstanding Youth League Cadre in Automation Department in HIT