

Associate Professor Ke-feng Zhai (K-F Zhai)

Education

- 2018 Post-doctoral fellow, Jinling Hospital, School of Medicine, Nanjing University
- 2015 Ph. D. China Pharmaceutical University
- 2008 B. Sc. Shi Hezi University

Position

- Associate Professor, Municipal Engineering Research Center of Natural medicine and Functional Food (head), Institute of Pharmaceutical Biotechnology, School of Biological and Food Engineering, Suzhou University

Research Interests

- Cardiovascular and cerebrovascular diseases
- Mechanism and target of active ingredient in traditional Chinese medicine
- Endothelial dysfunction
- Exosome and microRNAs

Representative Publications

- [1] Hong Duan, Zeng Dong, Han Li, Wan-rong Li, Shu-xiang Shi, Qing Wang, Wen-gen Cao, Xue-mei Fang, Ai-dong Fang, **Ke-feng Zhai***. Quality evaluation of bee pollens by chromatographic fingerprint and simultaneous determination of its major bioactive components. *Food and Chemical Toxicology*, 134 (2019) 110831.
- [2] **Ke-feng Zhai**, Hong Duan*, Cai-yue Cui, Yu-yao Cao, Jia-li Si, Hui-jiao Yang, Yong-chao Wang, Wen-gen Cao, Gui-zhen Gao, and Zhao-Jun Wei*. Liquiritin from *Glycyrrhiza uralensis* Attenuating Rheumatoid Arthritis via Reducing Inflammation, Suppressing Angiogenesis, and Inhibiting MAPK Signaling Pathway. *Journal of Agricultural and Food Chemistry*, 2019, 67(10):2856–2864.
- [3] **Ke-feng Zhai**, Hong Duan, Ghulam Jilany Khan, Hui Xu, Fang-kai Han, Wen-gen Cao, Gui-zhen Gao, Ling-ling Shan, Zhao-Jun Wei. Salicin from *Alangium chinense* Ameliorates Rheumatoid Arthritis by Modulating the Nrf2-HO-1-ROS Pathways. *Journal of Agricultural and Food Chemistry*, 2018, 66 (24):6073–6082.
- [4] **Zhai KF**, Duan H, Chen Y, Khan GJ, Cao WG, Gao GZ, Shan LL, Wei ZJ. Apoptosis effects of imperatorin on synoviocytes in rheumatoid arthritis through mitochondrial/caspase-mediated pathways. *Food & Function*, 2018, 9(4):2070–2079.

- [5] Shan LL, Zhuo X, Zhang FW, Dai YL, Zhu GZ, Yung BC, Fan WP, **Zhai KF**, Jacobson O, Kiesewetter DO, Ma Y, Gao GZ, Chen XY. A paclitaxel prodrug with bifunctional folate and albumin binding moieties for both passive and active targeted cancer therapy. *Theranostics*, 2018; 8(7): 2018-2030.
- [6] **Zhai KF**, Zheng JR, Tang YM, Li F, Lv YN, Zhang YY, Gao Z, Qi J, Yu BY, Kou JP. The saponin D39 blocks dissociation of nonmuscular myosin heavy chain IIA from TNF receptor 2, suppressing tissue factor expression and venous thrombosis. *British Journal of Pharmacology*, 2017, 174(17):2818-2831.
- [7] **Zhai KF**, Tang YM, Zhang YY, Li F, Wang Y, Cao ZY, Yu J, Kou JP, Yu BY. NMMHC IIA inhibition impedes tissue factor expression and venous thrombosis via Akt/GSK3 β -NF- κ B signaling pathways in the endothelium. *Thrombosis and Haemostasis*, 2015,114(1):173-185.
- [8] Duan, H., Dong, Z., Li, H., Li, W.-r., Shi, S.-x., Wang, Q., Cao, W.-g., Fang, X.-m., Fang, A.-d., **Zhai, K.-f.***, Quality evaluation of bee pollens by chromatographic fingerprint and simultaneous determination of its major bioactive components, *Food and Chemical Toxicology* (2019), doi: <https://doi.org/10.1016/j.fct.2019.110831>.
- [9] **Zhai KF**, Duan H, Luo L, Cao WG, Han FK, Shan LL, Fang XM. Protective effect of paeonol on inflammatory response in IL-1 β -induced human fibroblast-like synoviocytes and rheumatoid arthritis progression via modulating NF- κ B pathway. *Inflammopharmacology*, 2017,25(5):523-532.
- [10] **Zhai KF**, Duan H, Cao WG, Gao GZ, Shan LL, Fang XM, Zhao L. Protective effect of *Rabdosia amethystoides* (Benth) Hara extract on acute liver injury induced by Concanavalin A in mice through inhibition of TLR4-NF- κ B signaling pathway. *Journal of Pharmacological Sciences*, 2016,130(2):94-100.
- [11] **Zhai KF**, Gao GZ, Cao WG, Zhao L, Fang XM, Duan H. Simultaneous HPLC Determination of Four Active Compounds in Fengshiding Capsules, a Chinese Medicine. *Indian Journal of Pharmaceutical Sciences*, 2014, 76(5):379-466.
- [12] Shan LL, Shan X, Zhang TT, **Zhai KF**, Gao GZ, Chen XY, Gu YQ. Transferrin-conjugated paclitaxel prodrugs for targeted cancer therapy[J]. *RSC Advances*, 2016, 6(81), 77987-77998.
- [13] Li F, Zheng XJ, Fan XX, **Zhai KF**, Tan YS, Kou JP, Yu BY. YiQiFuMai Powder Injection Attenuates Ischemia/Reperfusion-Induced Myocardial Apoptosis Through AMPK Activation [J]. *Rejuvenation Research*, 2016, 19(6): 495-508.
- [14] Zhang YY, Sun MH, Han YW, **Zhai KF**, Tang YM, Qin XY, Cao ZY, Yu BY, Kou JP. The saponin DT-13 attenuates tumor necrosis factor- α -induced vascular inflammation associated with Src/NF- κ B/MAPK pathway modulation[J]. *International Journal of Biological Sciences*,2015, 11(8):970-981.
- [15] Li F, Lv YN, Tan, YS, Shen K., **Zhai KF**, Chen HL, Kou JP, Yu BY. An integrated pathway interaction network for the combination of four effective compounds from ShengMai preparations in the treatment of cardiocerebral ischemic diseases [J]. *Acta Pharmacologica Sinica*, 2015, 36: 1337-1348.

- [16] Li F, Tan YS, Chen HL, Yan Y, **Zhai KF**, Li DP, Kou JP, Yu BY. Identification of schisandrin as a vascular endothelium protective component in YiQiFuMai Powder Injection using HUVECs binding and HPLC-DAD-Q-TOF-MS/MS analysis[J]. Journal of Pharmacological Sciences, 2015,129, 1-8.
- [17] Zhang YY, Han YW, **Zhai KF**, Sun MH, Liu JH, Yu BY, Kou JP. Ophiopogonin-D suppresses MDA-MB-435 cell adhesion and invasion by inhibiting matrix metalloproteinase-9[J]. Molecular medicine reports, 2015, 12(1): 1493-1498.
- [18] Lv YN, Li SX, **Zhai KF**, et al. Network pharmacology-based prediction and verification of the molecular targets and pathways for schisandrin against cerebrovascular disease. Chinese Journal of Natural Medicines, 2014, 12(4):251-258.
- [19] Tan YS, Li F, Lv YN, **Zhai KF**, Chai CZ, Kou JP, Yu BY. Study on the Multi-targets Mechanism of YiQiFuMai Powder Injection on Cardio-Cerebral Ischemic Diseases Based on Network Pharmacology. J Proteomics Computational Biol. 2014;1(1): 9.

Research Grants

- 2018-up to now, Key Research and Development Project of Anhui Province (Grant No. 1804a0802225)
- 2017-2019, National Natural Science Foundation of China (Grant No. 81601034)
- 2017-2018, Postdoctoral Foundation of Jiangsu Province (Grant No. 1601173B)
- 2016-2017, National Natural Science Foundation of Anhui (Grant No. 1608085QH185)
- 2015-2016, The Key Natural Science Foundation of Anhui Educational Committee (Grant No. KJ2015A220)
- 2015-2016, The Key Project Fund for Outstanding Young Talents in Anhui Higher Education Institutions (Grant No. gxyqZD2016348)

Awards

- The second prize on science and technology progress of Anhui provincial traditional Chinese medicine in 2017
- The excellent science and technology workers of Suzhou municipality in 2017
- The second prize of outstanding young scholar of Anhui society of biotechnology in 2017

Professional Activities

- Reviewer, Biomedicine & Pharmacotherapy.
- Reviewer, Journal of Agricultural and Food Chemistry
- Reviewer, Histology and Histopathology.
- Reviewer, Pathology Research and Practice
- Reviewer, Oncotarget.
- Reviewer, Experimental and Therapeutic Medicine

- Reviewer, International Journal of Molecular Medicine
- Reviewer, Oncology Letters
- Reviewer, Molecular Medicine Reports
- Reviewer, Oncology Reports
- Reviewer, Artificial Cells, Blood Substitutes, and Biotechnology
- Reviewer, International Immunopharmacology
- Reviewer, Journal of Pharmacy and Pharmacology
- Reviewer, Phytotherapy Research
- Reviewer, Food and Chemical Toxicology