

# 毕毅教授



## 一、基本情况

毕毅，山东荣成，博士，教授/发展规划与学科建设处处长，  
0535-6916980, 13361368686@163.com。

## 二、学习及工作经历

- 20240--至今 烟台大学，教授，发展规划与学科建设处处长  
202309-202409 烟台大学，教授，科技处处长兼发展规划与学科建设处处长  
202201-202308 烟台大学，教授，科技处处长  
201902-202112 烟台大学，教授，药学院副院长  
201806-201901 烟台大学，副教授，药学院副院长  
201509-201609 芝加哥大学，访问学者  
201212-201805 烟台大学，副教授，药学院院长助理  
201111-201211 烟台大学，副教授，无  
200707-201110 烟台大学，讲师  
200209-200706 中国药科大学，药物化学，博士  
199809-200206 中国药科大学，国家基础药学理科基地班，学士

## 三、目前研究领域

聚焦恶性肿瘤和炎症等领域，利用计算机辅助药物设计，从事天然产物来源的先导化合物的发现、结构优化、生物活性和机制探索研究方面的工作。

## 四、社会兼职

SCI 期刊《Chinese Chemical Letters》青年编委

山东省人民政府学位委员会药学专业学位研究生教育指导委员会委员

## 五、主要科研成果

1.Ocotillol型C-24差向异构体分子探针化学构建及抗MRSA作用机制研究（81773563），国家自然科学基金面上项目

2.Xin Zhang, Wen Zhang, Laien Zhao, Gongshan Ma, Yanmei Huang, Zhiyuan Geng, Qian Jiang, Xiaomei Wen, Yuqi Lin, Qingguo Meng, Zhuhong Zhang\*, Yi Bi\*. Ocotillol Derivatives Mitigate Retinal Ischemia-Reperfusion Injury by Regulating the Keap1/Nrf2/ARE Signaling Pathway [J]. *Journal of Medicinal Chemistry*, 2024 Aug 15. <https://doi.org/10.1021/acs.jmedchem.4c00867>

3.Wenbin Xie, Haixia Li, Tao Yu, Yatong Zhu, Jing Gao, Xiaoli Yang, Haoran Cheng, Hui Qiao, Xin Zhang, Xiaojin Gao, Lei Zhang, Xianhe Fang, Leiming Zhang\*, Yi Bi\*. Design and Synthesis of Hederagenin Derivatives for the Treatment of Sepsis by Targeting TAK1 and Regulating the TAK1-NF-κB/MAPK Signaling [J]. *Journal of Medicinal Chemistry*, 2025 JAN 16. <https://doi.org/10.1021/acs.jmedchem.4c02032>

## 六、教学工作

1.研究生：药学前沿，药物化学专论

2.本科生：药物化学、新药研发案例中的药物化学

## 七、目前承担科研项目情况

1.山东省泰山学者青年专家岗位建设项目，项目编号：tsqn202306159，2023.01-2027.12，课题主持人。

2.新型夫西地酸衍生物的设计合成及其 STING 抑制活性的评价与机制探索，山东省自然科学基金面上项目，项目编号：ZR2023MH282，2024.01-2026.12，课题主持人。

## 八、发表论文

1. Zhiyuan Geng, Yingjie Wang, Mingyu Ma, Yan Wei, Wenbin Xie, Jie Cheng, Yutong Chen, Xianhe Fang, Hongbo Wang\*, and Yi Bi\*\*. Discovery and biological evaluation of hederagenin

derivatives as non-substrate Inhibitors of P-glycoprotein-mediated multidrug resistance[J]. *European Journal of Medicinal Chemistry*, **2025**, 289: 117428.

2. Wenbin Xie, Haixia Li, Tao Yu, Yatong Zhu, Jing Gao, Xiaoli Yang, Haoran Cheng, Hui Qiao, Xin Zhang, Xiaojin Gao, Lei Zhang, Xianhe Fang, Leiming Zhang\*, Yi Bi\*. Design and Synthesis of Hederagenin Derivatives for the Treatment of Sepsis by Targeting TAK1 and Regulating the TAK1-NF-κB/MAPK Signaling[J]. *Journal of Medicinal Chemistry*, **2025**, 68: 2694-2719.
3. Xin Zhang, Wen Zhang, Laien Zhao, Gongshan Ma, Yanmei Huang, Zhiyuan Geng, Qian Jiang, Xiaomei Wen, Yuqi Lin, Qingguo Meng\*, Zhuhong Zhang\*, and Yi Bi\*. Ocotillol Derivatives Mitigate Retinal Ischemia-Reperfusion Injury by Regulating the Keap1/Nrf2/ARE Signaling Pathway[J]. *Journal of Medicinal Chemistry*, **2024**, 67:15268-15290.
4. Gongshan Ma, Xiaojin Gao, Xin Zhang, Haixia Li, Zhiyuan Geng, Jing Gao, Shuxin Yang, Zhiruo Sun, Yuqi Lin, Xiaomei Wen, Qingguo Meng, Leiming Zhang\*, Yi Bi\*. Discovery of novel ocotillol derivatives modulating glucocorticoid receptor/NF-κB signaling for the treatment of sepsis[J]. *European Journal of Medicinal Chemistry*, **2024**, 271, 116427.
5. Haixia Li, Wenbin Xie, Xiaojin Gao, Zhiyuan Geng, Jing Gao, Gongshan Ma, Xuanyu Liu, Song Han, Yinchao Chen, Xiaomei Wen, Yi Bi\*, Leiming Zhang\*. Design and synthesis of novel hederagonic acid analogs as potent anti-inflammatory compounds capable of protecting against LPS-induced acute lung injury[J]. *European Journal of Medicinal Chemistry*. **2024**, 263:115941.
6. Wenbin Xie, Xianhe Fang, Haixia Li, Xilang Lu, Dong Yang, Song Han, Yi Bi\*. Advances in the anti-tumor potential of hederagenin and its analogs[J]. *European Journal of Pharmacology*, **2023**, 959, 176073.
7. Tao Yu, Hao-ran Cheng, Xiao-li Li, Wen-tao Huang, Hai-xia Li, Xiao-jin Gao, Jia-ning Zhao, Xin Zhang, Xiao-xiao Gu, Yi Bi\*, Lei-ming Zhang\*. Design and synthesis of hederagenin derivatives modulating STING/NF-κB signaling for the relief of acute liver injury in septic mice[J]. *European Journal of Medicinal Chemistry*, **2023**, 245, 114911.
8. Jun-jun Long, Tian-hao Ying, Lei Zhang, Tao Yu, Jin-hui Wu, Ya-sen Liu, Xiao-li Li, Guo-liang You, Lei-ming Zhang\*, Yi Bi\*. Discovery of fusidic acid derivatives as novel STING inhibitors for treatment of sepsis[J]. *European Journal of Medicinal Chemistry*, **2022**, 244, 114814.
9. Ying-jie Wang, Dou-dou Zhang, Gong-shan Ma, Zong-yi Su, Ming-ming Liu, Rui Wang, Qing-guo Meng, Yi Bi\*, Hong-bo Wang\*. Design, synthesis, and biological evaluation of ocotillol derivatives fused with 2-aminothiazole via A-ring as modulators of P-glycoprotein-mediated

- multidrug resistance[J]. *European Journal of Medicinal Chemistry*, **2022**, 243, 114784.
10. Wentao Huang, Yingjie Wang, Si Xu, Hui Qiao, Haoran Cheng, Linxu Wang, Shuqi Liu, Qingjian Tian, Ruodong Wang, Hongbo Wang\*\*, Yi Bi \*. Design, synthesis, and tumor drug resistance reversal activity of novel hederagenin derivatives modified by nitrogen-containing heterocycles[J]. *European Journal of Medicinal Chemistry*, **2022**, 232, 114207.
11. Junjun Long, Wentao Ji, Doudou Zhang, Yifei Zhu, Yi Bi \*. Bioactivities and Structure–Activity Relationships of Fusidic Acid Derivatives: A Review[J]. *Frontiers in Pharmacology*, **2021**, 12, 759220.
12. Binghua Wang, Shuqi Liu , Wentao Huang, Mengxin Ma, Xiaoqian Chen, Wenxuan Zeng, Kaicheng Liang, Hongbo Wang\*, Yi Bi\*, Xiaopeng Li. Design, synthesis, and biological evaluation of hederagenin derivatives with improved aqueous solubility and tumor resistance reversal activity[J]. *European Journal of Medicinal Chemistry*, **2021**, 211, 113107.
13. Mengqi Guo, Qianwen Ren, Binghua Wang, Wentao Ji, Jingxuan Ni, Yaqi Feng, Yi Bi\*, Jingwei Tian, Hongbo Wang\*. Discovery and synthesis of 3- and 21-substituted fusidic acid derivatives as reversal agents of P-glycoprotein-mediated multidrug resistance[J]. *European Journal of Medicinal Chemistry*, **2019**, 182, 111668.
14. Xiao Wang, Qian-wen Ren, Xian-xuan Liu, Yan-ting Yang, Bing-hua Wang, Rong Zha, Jia Grace Qi, Jing-wei Tian\*, Hong-bo Wang\*, Yi Bi \*. Synthesis and biological evaluation of novel H6 analogues as drug resistance reversal agents[J]. *European Journal of Medicinal Chemistry*, **2019**, 161, 364-377.
15. Jingxuan Ni, Mengqi Guo, Yucheng Cao, Lei Lei, Kangli Liu, Binghua Wang, Fangfang Lu, Rong Zha, Xiangwei Gao, Chunhong Yan, Hongbo Wang\*, Yi Bi \*. Discovery, synthesis of novel fusidic acid derivatives possessed amino-terminal groups at the 3-hydroxyl position with anticancer activity[J]. *European Journal of Medicinal Chemistry*, **2019**, 162, 122-131.
- ## 九、授权专利情况
- 毕毅; 王洪波; 黄文涛; 汪英杰; 徐斯; 王林旭; 乔惠; 姚虹颖; 王婼冬; 田庆健。A 环并异噁唑环常春藤皂苷元 C-23 位含氮杂环衍生物及其制备方法, ZL 2022 1 0000041.5, 2023.01.20
  - 毕毅; 张雷明; 龙俊俊; 应天昊; 张雷; 刘亚森; 吴金惠; 余涛; 朱奕霏; 李晓丽。一种具有抗炎活性的夫西地酸衍生物及其制备方法和应用, ZL 2022 1 1211181.3, 2022.09.30
  - 毕毅; 陈晓倩; 程浩然; 黄文涛; 王炳华; 曾文轩; 马梦馨; 梁凯程。常春藤皂苷元聚

乙二醇修饰的衍生物制备肿瘤耐药逆转剂的应用，ZL 2021 1 0705045.9, 2022.12.20

4. 毕毅；曹玉成；王恺奕；孟庆国。新奥克梯隆型皂苷元衍生物及制备抗耐药菌药物应用，ZL 2020 1 0548873.1, 2022.10.25
5. 毕毅；王洪波；曹玉成；王恺奕；刘书琪；刘雪村；孟庆国。ocotillol 型人参皂苷元 A 环并氨基噻唑环衍生物及制备方法，ZL 2020 1 0456871.X, 2022.04.12
6. 毕毅；王洪波；吉文涛；魏颖杰；钟丽娟；刘妍杰；龙俊俊；李小鹏。夫西地酸 A 环并氨基噻唑环衍生物的应用，ZL 2020 1 1177190.6, 2022.01.11
7. 毕毅；王洪波；王炳华；刘书琪；黄文涛；汪英杰；王加丽；徐斯；马梦馨。常春藤皂苷元聚乙二醇衍生物的应用，ZL 2020 1 1184557.7, 2022.01.11
8. 毕毅；王洪波；吉文涛；魏颖杰；钟丽娟；刘妍杰；龙俊俊；李小鹏。一种夫西地酸 A 环并氨基噻唑环衍生物及制备方法，ZL 2020 1 1174291.8, 2021.12.24
9. 毕毅；王洪波；傅风华；倪敬轩；曹玉成；郭梦琪；刘书琪；魏颖杰。一类夫西地酸衍生物的肿瘤耐药逆转活性应用，ZL 2018 1 1394575.0, 2021.05.25
10. 毕毅；王洪波；傅风华；倪敬轩；曹玉成；郭梦琪；刘书琪；魏颖杰。具有肿瘤耐药逆转活性的夫西地酸衍生物，ZL 2018 1 1394726.2, 2021.05.14
11. 毕毅；王洪波；倪敬轩；郭梦琦；王炳华；魏颖杰；马金波；张玮育。一类夫西地酸衍生物制备抗肿瘤药物的用途，ZL 2018 1 1112283.3, 2021.03.23
12. 毕毅；芦静；倪敬轩；曹玉成。氨基取代的夫西地酸衍生物在制备抗真菌药物中的应用，ZL 2018 1 1479612.8, 2021.01.01
13. 毕毅；王洪波；倪敬轩；郭梦琦；王炳华；魏颖杰；马金波；张玮育。具有抗肿瘤活性的夫西地酸衍生物及其合成制备方法，ZL 2018 1 1105318.0, 2021.01.01
14. 毕毅；芦静；倪敬轩；王炳华。夫西地酸衍生物及其合成制备方法和应用，ZL 2018 1 0504437.7, 2020.07.03