

## 葉麗 Li Ye



**職稱/Position:** 教授/Professor

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**教學科目:** 免疫學與微生物學; 現代生物技術

**Teaching activity:** Immunology and Microbiology; Modern Biotechnology

**研究方向:** 用於免疫治療的抗體融合蛋白與重組細胞因子; 免疫檢查點抑制劑; 抗體-藥物偶聯物; 生物轉化與微生物發酵

**Research interest:** Antibody fusion protein and recombinant cytokine for immunotherapy; Immune checkpoint inhibitor; Antibody-drug conjugate; Biotransformation and Microbial Fermentation.

**研究课题/Research project:**

1. 上海市科学技术委员会, 生物医药科技支撑专项, 20S11901600, 靶向PD-L1和Wnt信号治疗脑胶质瘤的创新抗体-免疫激活偶联物研究与开发, 2020-10 至 2023-09/A novel Immune-stimulating Antibody Conjugates (ISAC) targeting PD-L1 and Wnt signaling for the treatment of glioma. Scientific and Innovative Action Plan of Shanghai, No. 20S11901600 (2020-2023).

2. 上海市科学技术委员会, 生物医药重点项目, 18431902800, 创新免疫检查点抑制剂 SIRP $\alpha$ -Fc 融合蛋白的临床前研究, 2018-04 至 2021-06/  
Preclinical study of a novel immune checkpoint inhibitor SIRP $\alpha$ Fc fusion protein. Scientific and Innovative Action Plan of Shanghai, No. 18431902800 (2018-2021).
3. 国家自然科学基金面上项目, 81572979, 利用非天然氨基酸构建位点特异性 IL2/sorafenib 偶联物及其抗肿瘤作用机制研究, 2016-01 至 2019-12/  
Construction of site-specific IL-2/Sorafenib conjugates using unnatural amino acids and the antitumor activity and mechanism. National Natural Science Foundation of China, No. 81572979(2016-2019).
4. 上海高水平地方高校创新团队“原创生物药发现与转化” (2021.10-2024.07)  
/Shanghai high-level local university innovation team “Cancer metastasis and original biologics”(2021-2024).

### **學歷/Education**

- 2010 復旦大學, 博士學位/PhD, School of Pharmacy, Fudan University, Shanghai, China
- 2000 復旦大學, 碩士學位/Master, School of Pharmacy, Fudan University, Shanghai, China
- 1992 上海醫科大學, 學士學位/Bachelor, School of Pharmacy, Shanghai Medical University, Shanghai, China.

### **工作經驗/Work experience**

- 2022- 澳門科技大學, 教授/ Professor, Macau University of Science and Technology
- 2011-2022 復旦大學, 副教授/Associate professor, Fudan University, Shanghai, China
- 1997-2011 復旦大學, 講師/ Lecturer, Fudan University, Shanghai, China

1992-1997 上海醫科大學, 助教/ Assistant, Shanghai Medical University, Shanghai, China

### 代表性文章/Publications

1. Wang S, Fu Y, Kuerban K, Liu J, Huang X, Pan D, Chen H, Zhu YZ, **Ye L\***. Discoidin domain receptor 1 (DDR1) is a potential target correlated with tumor invasion and immune infiltration in gastric cancer. *Front. Immunol.* 2022; 13:933165.
2. Liu J, Meng Z, Xu T, Kuerban K, Wang S, Zhang X, Fan J, Ju D, Tian W, Huang X, Huang X, Pan D, Chen H, Zhao W and **Ye L\***. A SIRPaFc Fusion Protein Conjugated with the Collagen-Binding Domain for Targeted Immunotherapy of Non-Small Cell Lung Cancer. *Front. Immunol.* 2022;13:845217.
3. 张慧, 陈华宁, 库德莱迪·库尔班, 王松娜, 赵缜, **叶丽\***. Wnt/ $\beta$ -catenin 信号通路与癌症发生发展. *中国生物工程杂志.* 2022;42:47-54.
4. Li J, Zhang H, Bei S, Zhang X, Li H, **Ye L\***, Feng L\* Disruption of Wnt/ $\beta$ -catenin pathway elevates the sensitivity of gastric cancer cells to PD-1 antibody. *Curr Mol Pharmacol.* 2022, 15, 557-569.
5. Zhang H, Bi Y, Wei Y, Liu J, Kuerban K, **Ye L\***. Blocking Wnt/ $\beta$ -catenin Signal Amplifies Anti-PD-1 Therapeutic Efficacy by Inhibiting Tumor Growth, Migration, and Promoting Immune Infiltration in Glioblastomas. *Molecular cancer therapeutics.* 2021;20(7):1305-1315.
6. Kuerban K, Gao X, Zhang H, Liu J, Dong M, Wu L, Ye R, Feng M, **Ye L\***. Doxorubicin-loaded bacterial outer-membrane vesicles exert enhanced anti-tumor efficacy in non-small-cell lung cancer. *Acta Pharmaceutica Sinica B.* 2020;10(8): 1534-1548.
7. Wang K, Kuerban K, Wan Q, Yu Z, **Ye L\***, Chen Y\*. Introduction of Mercaptoethyl at Sorafenib Pyridine-2-Amide Motif as a Potentially Effective Chain to Further get Sorafenib-PEG-DGL. *Molecules.* 2020;25: 573.

8. Dong M, Ye T, Bi Y, Wang Q, Kuerban K, Li J, Feng M, Wang K, Chen Y, **Ye L\***. A novel hybrid of 3-benzyl coumarin seco-B-ring derivative and phenylsulfonylfuroxan induces apoptosis and autophagy in non-small-cell lung cancer. *Phytomedicine*. 2019;52: 79-88.
9. Ji Y, Wang Q, Zhao Q, Zhao S, Li L, Sun G, **Ye L\***. Autophagy suppression enhances DNA damage and cell death upon treatment with PARP inhibitor Niraparib in laryngeal squamous cell carcinoma. *Applied Microbiol Biotechnol*. 2019;103:9557-9568.
10. Zhang X#, Wang Y#, Fan J, Chen W, Luan J, Mei X, Wang S, Li Y, **Ye L**, Li S, Tian W, Yin K\*, Dianwen Ju\*. Blocking CD47 efficiently potentiated therapeutic effects of anti-angiogenic therapy in non-small cell lung cancer. *J Immunother Cancer*. 2019;7:346.
11. Gu Z, Fu A, **Ye L**, Kuerban K, Wang Y, Cao Z. Ultra-Sensitive Chemiluminescence Biosensor for Nuclease and Bacteria Determination Based on Hemin-Encapsulated Mesoporous Silica Nanoparticle. *ACS Sensors* (2019), DOI:10.1021/acssensors.9b01303.
12. Qi F, Zhang C, Jiang S, Wang Q, Kuerban K, Luo M, Dong M, Zhou X, Wu L, Jiang B, **Ye L\***. S-ethyl ethanethiosulfinate, a derivative of allicin, induces metacaspase-dependent apoptosis through ROS generation in *Penicillium chrysogenum*. *Biosci Rep*, 2019(39): BSR20190167.
13. Wang Y, Wang Q, Kuerban K, Dong M, Qi F, Li G, Ling J, Qiu W, Zhang W, **Ye L\***. Colonic electrical stimulation promotes colonic motility through regeneration of myenteric plexus neurons in slow transit constipation beagles. *Biosci Rep*, 2019(39): BSR20182405.
14. Dong M, Meng Z, Kuerban K, Qi F, Liu J, Wei Y, Wang Q, Jiang S, Feng M, **Ye L\***. Diosgenin promotes anti-tumor immunity and PD-1 antibody efficacy against melanoma by regulating intestinal microbiota. *Cell Death Dis*. 2018;9:1039.
15. Wang Q, Guo Y, Jiang S, Dong M, Kuerban K, Li J, Feng M, Chen Y, **Ye L\***. A hybrid of coumarin and phenylsulfonylfuroxan induces caspase-dependent apoptosis and cytoprotective autophagy in lung adenocarcinoma cells. *Phytomedicine*. 2018;39:160-167.

16. Song G, Yang D, Wang Y, Chris de Graaf, Zhou Q, Jiang S, Liu K, Cai X, Dai A, Lin G, Liu D, Wu F, Wu Y, Zhao S, **Ye L**, Han GW, Lau J, Wu B, Hanson MA, Liu Z, Wang M & Stevens RC. Human GLP-1 receptor transmembrane domain structure in complex with allosteric modulators. *Nature*. 2017;546: 312-315. doi:10.1038/nature22378.
17. Song P, Wang Z, Zhang X, Fan J, Li Y, Chen Q, Wang S, Liu P, Luan J, **Ye L\***, Ju D\*. The role of autophagy in asparaginase-induced immune suppression of macrophages. *Cell Death & Dis*. 2017;8: e2721.
18. Jiang S, Wang Q, Feng M, Li J, Guan Z, An D, Dong M, Peng Y, Kuerban K, **Ye L\***. C2-ceramide enhances sorafenib-induced apoptosis via Caspase-dependent and PI3K/AKT/mTOR signaling pathways in HCC cells. *Appl. Microbiol Biotechnol*. 2017;101:1535-1546.
19. Hu X, Shi S, Wang H, Yu X, Wang Q, Jang S, Ju D, **Ye L\***, Feng M\*. Blocking autophagy improves the anti-tumor activity of afatinib in lung adenocarcinoma with activating EGFR mutations in vitro and in vivo. *Sci Rep*. 2017;7:4559.
20. Chen Q#, **Ye L#**, Fan J, Zhang X, Song P, Wang Z, Wang S, Li Y, Luan J, Wang Y, Chen W, Zai W, Yang P, Cao Z, Ju D. Autophagy suppression potentiates the anti-glioblastoma effect of asparaginase in vitro and in vivo. *Oncotarget*. 2017;8(53):91052-91066.
21. Li J, Wang W, Han L, Feng M, Lu H, Yang L, Hu X, Shi S, Jiang S, Wang Q, **Ye L\***. Human apolipoprotein A-I exerts a prophylactic effect on high fat diet-induced atherosclerosis in a rabbit model via inflammation inhibition. *Acta Biochimica et Biophysica Sinica*. 2017, 49(2), 149-158.
22. Jiang S, Fan J, Wang Q, Ju D, Feng M, Li J, Guan Z, An D, Wang X, **Ye L\***. Diosgenin induces ROS-dependent autophagy and cytotoxicity via mTOR signaling pathway in chronic myeloid leukemia cells. *Phytomedicine*. 2016, 23: 243-252.
23. **Ye L**, Fan J, Shi X, Tao Q, Ye D, Xian Z, Zeng X, Li Y, Feng M, Ju D.

Tumor necrosis therapy antibody interleukin-2 fusion protein elicits prolonged and targeted antitumor effects in vivo. *Appl. Microbiol Biotechnol.* 2014, 98: 4053-4061.

24. Song P#, **Ye L#**, Fan J, Li Y, Zeng X, Wang Z, Wang S, Zhang G, Ping Yang, Cao Z, Ju D. Asparaginase induced apoptosis and cytoprotective autophagy in chronic myeloid leukemia cells. *Oncotarget.* 2015, 6(6): 3861-3873.

25. Feng M, Liao Z, Han L, Li J, **Ye L\***. Enhancement of microbial hydroxylation of 13-ethylgon-4-ene-3,17-dione by *Metarhizium anisopliae* using nanoliposome technique. *J. Ind. Microbiol. Biotechnol.* 2014, 41(4): 619-627.

26. **Ye L#**, Zhang C#, Li J, Shi X, Feng M. Effects of external calcium on the biotransformation of ginsenoside Rb1 to ginsenoside Rd by *Paecilomyces bainier 229-7*. *World J. Microbiol. Biotechnol.* 2012, 28(3): 857-863.

27. **Ye L**, Liu X, Zhou W, Feng M, Shi X, Li J, Chen D, Zhou P. Microbial transformation of astragalosides to astragaloside IV by *Absidia corymbifera* AS2, *Process Biochem*, 2011, 46 (9) : 1724-1730.

28. **Ye L**, Zhou C, Zhou W, Zhou P, Chen D, Liu X, Shi X, Feng M. Biotransformation of ginsenoside Rb1 to ginsenoside Rd by highly substrate-tolerant *Paecilomyces bainier 229-7*, *Bioresour. Technol.*, 2010, 101 (20) : 7872-787.

#### 授權專利/Licensed Patents

1. The application of *Metarhizium anisopliae* mutant in steroid hydroxylation. ZL 2011 1 0199550.7.
2. Microbial transformation of astragalosides to astragaloside IV by *Absidia corymbifera* AS2. ZL 2010 1 0615265.4
3. Biotransformation of ginsenoside Rb1 to ginsenoside Rd. ZL 2011 1 0207782.2

4. Optimization methods for biotransformation of desogestrel using nano-liposome technique. ZL 2013 1 048 4977.0

### **教材/Textbook**

《生物技術藥物學》 (2022, 科學出版社, 副主編)

《生物技術製藥》 (2016和2021版, 中國醫藥科技出版社, 編委)

《生物製藥工藝學》 (2016和2022版, 人民衛生出版社, 編委)