



FU Leilei

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School of Life Science and Engineering
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BIO

Education

- **PhD**, Sichuan University, Biochemistry and Molecular Biology (2015)
- **B.E.**, Xihua University, Bioengineering (2010)

Employment

Academic Appointments

- Associate Professor, School of Life Science and Engineering, Southwest Jiaotong University, Chengdu, China (2018-)
- Postdoctoral Fellow, State Key Laboratory of Biotherapy and Cancer Center, West China Hospital, Sichuan University, Chengdu, China (2015-2017)

RESEARCH INTERESTS

- Design and discovery of small molecule drugs based on the innovative target of autophagy and investigate the mechanisms of against tumor and Parkinson's disease;
- Develop systems biology and bioinformatics approaches to identify novel targets for autophagy and investigate the mechanisms of action for the drug repurposing.

SELECTED PUBLICATIONS

Principal Publications of the Last Five Years

- 1. Zhang L#, Fu L#, Zhang S, Zhang J, Zhao Y, Zheng Y, He G, Yang S, Ouyang L, Liu B. Discovery of a novel synthesized small molecule (LYN-1604) targeting ULK1-modulated autophagic cell death of triple negative breast cancer in vitro and in vivo, *Chemical Science*. 8 (2017) 2687-2701. (#co-first author)
- 2. Wang G, Zhao Y, Liu Y, Sun D, Zhen Y, Liu J, Fu L*, Zhang L*, Ouyang L*. Discovery of a novel dual-target inhibitor of ERK1 and ERK5 that induces regulated cell death to overcome compensatory mechanism in specific tumor types. *Journal of Medicinal Chemistry*. 63 (2020) 3976-3995. (*corresponding author)
- 3. Zhao R#, Fu L#, Yuan Z, Liu Y, Zhang K, Chen Y, Wang L, Sun D, Chen L, Liu B, Zhang L: Discovery of a novel small-molecule inhibitor of Fam20C that induces apoptosis and inhibits migration in triple negative breast cancer. *Eur J Med Chem* 2020, 210:113088. (#co-first author)
- 4. Yao ZQ, Zhang X, Zhen Y, He XY, Zhao S, Li XF, Yang B, Gao F, Guo FY, Fu L, et al. A novel small-molecule activator of Sirtuin-1 induces autophagic cell

death/mitophagy as a potential therapeutic strategy in glioblastoma. *Cell Death & Disease*. 9 (2018) 767. (*corresponding author)

- 5. Fan CL, Yao ZH, Ye MN, Fu LL, Zhu GN, Dai Y, Yao XS. Fuziline Alleviates Isoproterenol-Induced Myocardial Injury by Inhibiting ROS-triggered Endoplasmic Reticulum Stress via PERK/eIF2 α /ATF4/Chop Pathway. *Journal of Cellular and Molecular Medicine*. 24(2020):1332-1344. (*corresponding author)
- 6. Chen Y, Sa Y, Wang G, Pan X, Zhen Y, Cheng X, Zhang K, Fu L, Wang H, Liu B. The protective effects of citrullus colocynthis on inhibiting oxidative damage and autophagy-associated cell death in Parkinson's disease, *Journal of the Taiwan Institute of Chemical Engineers*, 100 (2019) 18-25. (*corresponding author)
- 7. Chen Y, Zheng Y, Jiang Q, Qin F, Zhang Y, Fu L, He G. Integrated bioinformatics, computational and experimental methods to discover novel Raf/extracellular-signal regulated kinase (ERK) dual inhibitors against breast cancer cells. *European Journal of Medicinal Chemistry*, 127 (2017) 997-1011. (*corresponding author)
- 8. Sun D, Zhu L, Yao D, Chen L, Fu L, Ouyang L. Recent progress in potential anti-hepatitis B virus agents: Structural and pharmacological perspectives. *European Journal of Medicinal Chemistry*, 147(2018) 205-217. (*corresponding author)
- 9. Yao D, Wang P, Zhang J, Fu L, Ouyang L, Wang J. Deconvoluting the relationships between autophagy and metastasis for potential cancer therapy, *Apoptosis*. 21 (2016) 683-698. (*corresponding author)
- 10. Wang H, Yin Y, Wang P, Xiong C, Huang L, Li S, Li X, Fu L. Current situation and future usage of anticancer drug databases, *Apoptosis*. 21 (2016) 778-794. (*corresponding author)
- 11. Fu L, Wang S, Wang X, Wang P, Zheng Y, Yao D, Guo M, Zhang L, Ouyang L. Crystal structure-based discovery of a novel synthesized PARP1 inhibitor (OL-1) with apoptosis-inducing mechanisms in triple-negative breast cancer. *Scientific Reports*, 6 (2016) 3. (first author)

SELECTED AWARDS AND HONORS

- Excellent Master of Sichuan University (2010-2011)
- "Top 100" student individual Award (2011)
- The 3rd Academic Star and Best Academic Demeanor Exhibition Award of Sichuan University (2012)
- National Scholarship for Doctoral Students (2013, 2014)
- Tang Lixin Outstanding Student Scholarship of Sichuan University (2012, 2013)

PROFESSIONAL ACTIVITIES

- Senior Member of Chinese Pharmaceutical Association

RESEARCH

Current Research

- Structural optimization of alkaloid derivatives in medicinal watermelon and molecular mechanism targeting SIRT1 against Parkinson's disease.

TEACHING

Primary Teaching areas

- Life Science and Engineering

Current Courses

- Genetic Engineering

GRADUATE SUPERVISION

IN THE NEWS

- A collaborative study by the School of Life Sciences found the first small molecule inhibitor that selectively targets ERK1/ERK5