



刘琼 博士

南昌大学基础医学院讲师

● 教育和工作背景:

2010 四川农业大学动物医学专业 学士

2016 四川农业大学预防兽医学专业 博士

2014-2015 美国亚利桑那州立大学生物设计中心 联合培养

2016-至今 南昌大学基础医学院 讲师

● 研究兴趣、领域:

课题组致力于研究细菌外膜修饰机制以及细菌外膜囊泡疫苗研发。1、以沙门菌、幽门螺杆菌为研究对象，通过基因工程技术重塑细菌外膜，并基于其外膜囊泡开发新颖的外膜囊泡递呈载体，使其高效递呈外源多糖以及蛋白抗原或者自身抗原，从而构建一系列针对不同胃肠道致病菌（霍乱弧菌、志贺菌、幽门螺杆菌等）的重组外膜囊泡疫苗用于预防和治疗细菌感染。2、以幽门螺杆菌为对象，通过对外膜进行修饰，揭示细菌外膜合成机制以及外膜囊泡的形成机制，并基于外膜囊泡，研究细菌与宿主相互作用新机制，以期通过切断细菌与宿主互作机制来达到防治细菌病的目的，设计新颖的抗菌作用靶点和抗菌药物。近年来在以第一作者或者通讯作者在*Frontiers in Microbiology*、*International Journal of Medical Microbiology*、*Marine Drugs*等学术期刊发表论文8篇，累计影响因子超过30。

● 代表性论文:

1. **Qiong Liu**, Kuang Tan, Jianhui Yuan, Kuangyu Song, Rong Li, Qing Liu, Xiaotian Huang. (2018). Flagellin-deficient outer membrane vesicles as adjuvant induce

cross-protection of *Salmonella* Typhimurium outer membrane proteins against infection by heterologous *Salmonella* serotypes. *International Journal of Medical Microbiology*. (Accepted).

2. Kuang Tan, Ruizhen Li, Xiaotian Huang, **Qiong Liu**#. (2018). Outer Membrane Vesicles: Current Status and Future Direction of These Novel Vaccine Adjuvants. *Frontiers in Microbiology*, 9. (# Corresponding author)

3. **Qiong Liu**, Jie Yi, Kang Liang, Xiangmin Zhang, Qing Liu. (2017). *Salmonella* Choleraesuis outer membrane vesicles: proteomics and immunogenicity. *Journal of Basic Microbiology*. 57(10), 852-861.

4. **Qiong Liu**, Jie Yi, Kang Liang, Xiangmin Zhang, Qing Liu. (2017). Outer membrane vesicles derived from *Salmonella* Enteritidis protect against the virulent wild-type strain infection in a mouse model. *Journal of Microbiology and Biotechnology*. 27(8), 1519-1528.

5. **Qiong Liu**, Qing Liu, Jie Yi, Kang Liang, Bo Hu, Xiangmin Zhang, Roy Curtiss, Qingke Kong. (2016). Outer membrane vesicles from flagellin-deficient *Salmonella* enterica serovar Typhimurium induce cross-reactive immunity and provide cross-protection against heterologous *Salmonella* challenge. *Scientific Reports*, 6:34776.

6. **Qiong Liu**, Qing Liu, Jie Yi, Kang Liang, Tian Liu, Kenneth L. Roland, Yanlong Jiang, Qingke Kong. (2016). Outer membrane vesicles derived from *Salmonella* Typhimurium mutants with truncated LPS induce cross-protective immune responses

against infection of *Salmonella enterica* serovars in the mouse model. *International Journal of Medical Microbiology*. 306(8).

7. **Qiong Liu**, Qin Liu, Xinxin Zhao, Tian Liu, Kang Liang, Qingke Kong. (2016). Immunogenicity and Cross-Protective Efficacy Induced by Outer Membrane Proteins from *Salmonella Typhimurium* Mutants with Truncated LPS in Mice. *International journal of molecular sciences*, 17(3), 416.

8. **Qiong Liu**, Yanyan Li, Xinxin Zhao, Xue Yang, Qing Liu, Qingke Kong. (2015). Construction of *Escherichia coli* Mutant with Decreased Endotoxic Activity by Modifying Lipid A Structure. *Marine drugs*, 13(6), 3388-3406.

● 所获项目、荣誉、奖励及参加学术团体的情况：

2017年 国家重点研发计划“Hp感染调控胃粘膜上皮细胞改变的机制”(150万元)，参加；

2018年 国家自然科学基金地区项目“重组幽门螺杆菌外膜囊泡疫苗的构建与免疫保护效力评估”(40万)，主持

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