浙江省科学技术奖公示信息表（单位提名）

提名奖项：**（自然科学奖）**

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| 成果名称 | 铜绿假单胞菌抗药相关膜转运蛋白AmpG的构效关系研究 |
| 提名等级 | 二等奖 |
| 提名书  相关内容 | 1. Peizhen Li, Jun Ying, Guangjian Yang, Aifang Li, Jian Wang, Junwan Lu, Junrong Wang, Teng Xu, Huiguang Yi, Kewei Li, Shouguang Jin, Qiyu Bao\*, Kaibo Zhang\*. Structure-Function Analysis of the Transmembrane Protein AmpG from Pseudomonas aeruginosa. ***PLoS One***. 2016 Dec 13;11(12):e0168060. 2. Kewei Li, Guangjian Yang, Alexander B. Debru, Pingping Li, Li Zong, Peizhen Li, Teng Xu, Weihui Wu\*, Shouguang Jin\* and Qiyu Bao\*. SuhB Regulates the Motile-Sessile Switch in Pseudomonas aeruginosa through the Gac/Rsm Pathway and c-di-GMP Signaling. ***Front Microbiol.*** 2017 Jun 8;8:1045. doi: 10.3389/fmicb.2017.01045. 3. Lingli Hou, Alexander Debru, Qianqian Chen, Qiyu Bao\* and Kewei Li\*. AmrZ Regulates Swarming Motility Through Cyclic di-GMP-Dependent Motility Inhibition and Controlling Pel Polysaccharide Pro4duction in Pseudomonas aeruginosa PA14. ***Front Microbiol***. 2019 Aug 14;10:1847. doi: 10.3389/fmicb.2019.01847. 4. Qianqian Chen, Wangxiao Zhou, Changrui Qian, Kai Shen, Xinyi Zhu, Danying Zhou, Zhewei Sun, Wei Lu, Hongmao Liu, Kewei Li, Teng Xu, Qiyu Bao\* and Junwan Lu\*. OXA-830, a Novel Chromosomally Encoded Extended-Spectrum Class D β-Lactamase in Aeromonas simiae. ***Front Microbiol.*** 2019 Nov 26; 10:2732. doi: 10.3389/fmicb.2019.02732. 5. Jian Wang, Teng Xu, Jun Ying, Wangxiao Zhou, Qianqian Chen, Changrui Qian, Xinyi Zhu, Kai Shen, Peizhen Li, Kewei Li, **Qiyu Bao,**\* and Junwan Lu\*. PAU-1, a novel plasmid-encoded Ambler class A β-lactamase identified in a clinical Pseudomonas aeruginosa isolate. ***Infect Drug Resist***. 2019 Dec 5;12:3827-3834. doi: 10.2147/IDR.S225288. 6. Pingping Li†, Kai Shen† , Ying Zhang†, Jianchao Ying, Tingyuan Zhu, Yabo Liu, Lei Xu, Chaoqing Lin, Kaibo Zhang\*, Peizhen Li, Junwan Lu, Kewei Li, Huiguang Yi, Qiyu Bao and Teng Xu\*. Characterization of a Novel blaKLUC Variant With Reduced β-Lactam Resistance From an IncA/C Group Plasmid in a Clinical Klebsiella pneumoniae Isolate. ***Front Microbiol.*** 2018 Aug 15; 9:1908. doi: 10.3389/fmicb.2018.01908. 7. Mei Zhu, Guangjian Yang, Ailing Li, Li Zong, Zhaoguang Dong, Junwan Lu, Kaibo Zhang, Cong Cheng, Qingli Chang, Xiuying Wu, Jianchao Ying, Xianneng Li, Li Ding, Haixiao Zheng, Junping Yu, Jun Ying, Teng Xu, Huiguang Yi, Peizhen Li, Kewei Li, Songquan Wu, Qiyu Bao⁎, Junrong Wang\*. Identification and molecular characterization ofEscherichia coli blaSHV genes in a Chinese teaching hospital.***Gene.*** 2017 Feb5, 600:29-35. 8. Jianchao Ying†, Songquan Wu†, Kaibo Zhang, Ziqiang Wang, Wen Zhu, Mei Zhu, Ying Zhang, Cong Cheng, Huifeng Wang, Huifen Tou, Chuanxin Zhu, Peizhen Li, Jun Ying, Teng Xu, Huiguang Yi, Jinsong Li, Liyan Ni, Zuyuan Xu, Qiyu Bao\* and Junwan Lu2\*. Comparative genomics analysis of pKF3-94 in Klebsiella pneumoniae reveals plasmid compatibility and horizontal gene transfer. ***Front Microbiol.*** 2015 Aug 18;6:831. doi: 10.3389/fmicb. 2015.00831. |
| 主要完成人 | 包其郁，排名1，教授，温州医科大学；  卢俊婉，排名2，讲师，温州医科大学（金华职业技术学院）；  李科伟，排名3，副教授，温州医科大学；  李佩珍，排名4，高级实验师，温州医科大学；  朱玫，排名5，主管技师，温州医科大学（浙江医院）。 |
| 主要完成单位 | 单位名称：温州医科大学 |
| 提名单位 | 浙江省教育厅 |
| 提名意见 | 该项目在有关科研基金和科研项目的资助下，对铜绿假单胞菌耐药相关基因*ampG*的多样性结构及其与功能的关系进行了研究，结合生物信息学手段预测*ampG*基因编码的膜转运蛋白的三维结构，并通过实验验证了与AmpG功能相关的关键氨基酸位点，为建立以AmpG为靶点的抗菌药物筛选模型，筛选化合物库，从化合物库中找出与之结合的能阻遇AmpG蛋白跨膜转运糖肽功能的化合物打下基础。该项目同时研究了细菌耐药性形成机制和耐药性基因水平转移引起耐药性播散的分子机制，尤其是发现了两个新型耐药性基因和两个耐药性基因的新亚型，为更加深入研究细菌耐药性机制打下基础。本项目的研究成果对进一步揭示细菌的耐药性形成机制，筛选或设计化合物用于抗感染治疗都具有一定的参考价值。 |