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2010年7月至今在南京农业大学农学院从事教学科研工作。教学上担任本科生课程《遗传学》、《细胞遗传学》和研究生课程《植物生物技术概论》的教学任务, 科研上主要开展簇毛麦基因组优异基因的发掘与利用工作。发现并提出了小麦白粉病组织差异抗病新类型, 发现的 *Pm55*、*Pm62* 和 *Pm67* 已被国际小麦基因委员会命名。还发现了全生育期广谱抗白粉病基因 *Pm5V* 及慢条锈病基因 *Yr5V*。创制了具有较高育种利用价值的小麦-簇毛麦 T1DL.1VS 易位系和 T5DL.5VS 易位系。目前主要进行组织差异抗白粉病基因 *Pm55* 和 *Pm67* 的遗传机制解析以及慢条锈病基因 *Yr5V* 的克隆工作。以第一或通讯作者发表 SCI 论文 20 余篇, 第一发明人授权/申请发明专利 4 项。近年来, 主持国家自然科学基金 3 项、转基因重大专项课题 1 项、江苏省自然科学基金、江苏省农业自主创新基金等 8 项国家与省部级科研项目。

一: 在研项目

- 1: 小麦-簇毛麦 T2VL.2DS 易位系抗纹枯病遗传效应分析与新种质创制。国家自然科学基金项目 (No.31871619)
- 2: 簇毛麦 2VL 染色体臂上抗小麦纹枯病基因定位与新种质创制。江苏省自然科学基金项目 (BK20181316)
- 3: 簇毛麦 5VS 上不同类型抗白粉病基因 *Pm55* 和 *Pm5V* 的精细定位与聚合。国家自然科学基金项目 (No. 31971938)
- 4: 基于白粉病抗病基因 *Pm55* 为选择标记的优质弱筋小麦高效育种技术体系构建。江苏现代农业重大核心技术创新项目 (CX (19) 1001)

二: 近期主要论文

1. Zhang Ruiqi, Zhang Mingyi, Wang Xiue, Chen Peidu. Introduction of chromosome segment carrying the seed storage protein genes from chromosome 1V of *Dasypyrum villosum* showed positive effect on bread-making quality of common wheat. *Theor Appl Genet*, 2014, 127:523-533.
2. Zhang Ruiqi, Hou Fu, Feng Yigao, Zhang Wei, Zhang Mingyi, Chen Peidu. Characterization of a *Triticum aestivum*-*Dasypyrum villosum* T2VS 2DL translocation line expressing a longer spike and more kernels traits. *Theor Appl Genet*, 2015, 128:2415-2425.
3. Zhang Ruiqi, Sun Bingxiao, Chen Juan, Cao Aizhong, Xing Liping, Feng Yigao, Lan Caixia, Chen Peidu. *Pm55*, a developmental-stage and tissue-specific powdery mildew resistance gene introgressed from *Dasypyrum villosum* into common wheat. *Theor Appl Genet*, 2016, 129:1975-1984.
4. Zhang Ruiqi, Feng Yigao, Li Haifeng, Yuan Hongxia, Dai Junli, Cao Aizhong, Xing Liping, Li Honglian. Cereal cyst nematode resistance gene *CreV* effective against *Heterodera filipjevi* transferred from chromosome 6VL of *Dasypyrum villosum* to bread wheat. *Mol Breeding*, 2016, 36:122
5. Zhang Ruiqi, Yao Ruonan, Sun Dafei, Sun Bingxiao, Feng Yigao, Zhang Wei, Zhang Mingyi. Development of V chromosome alterations and physical mapping of molecular markers specific to *Dasypyrum villosum*. *Mol Breeding*, 2017, 37: 67
6. Chen Shulin, Chen Juan, Hou Fu, Feng Yigao, Zhang Ruiqi (通讯作者). iTRAQ-based quantitative proteomic analysis reveals the lateral meristem developmental mechanism for branched spike development in tetraploid wheat (*Triticum turgidum* L.). *BMC Genomics*, 2018, 19:228
7. Zhang Ruiqi, Fan Yali, Kong Lingna, Wang Zuojun, Wu Jizhong, Xing Liping, Cao Aizhong, Feng Yigao. *Pm62*, an adult-plant powdery mildew resistance gene introgressed from *Dasypyrum villosum* chromosome arm 2VL into wheat. *Theor Appl Genet*, 2018, 131:2613-2620
8. Zhang Ruiqi, Singh RP, Lillemo M, He Xinyao, Randhawa MS, Huerta-Espino J, Singh PK, Li Zhikang, Lan

Caixia. Two main stripe rust resistance loci identified in a synthetic derived wheat line Soru#1. *Phytopathology*, 2019, 109:120-126

9. Zhang Ruiqi; Xiong Chuanxi; Mu Huanqing; Yao Ruonan; Meng Xiangru; Kong Lingna; Xing Liping; Wu Jizhong; Feng Yigao; Cao Aizhong. *Pm67*, a new powdery mildew resistance gene transferred from *Dasypyrum villosum* chromosome 1V to common wheat (*Triticum aestivum* L.)[J]. *The Crop Journal*, 2021, online.