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

成果名称	杂草基因组及其与作物协同进化机制研究
提名等级	一等奖
提名书相关内容（附表）	见附表
主要完成人	樊龙江，排名1，教授，浙江大学； 陆永良，排名2，研究员，中国水稻研究所； 叶楚玉，排名3，教授，浙江大学； 郭龙彪，排名4，研究员，中国水稻研究所； 柏连阳，排名5，教授，湖南省农业科学院；
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提名单位	浙江大学
提名意见	农业杂草与作物之间就有着密切关系，研究杂草对作物生产具有重要意义。申报人聚焦稻田杂草稗草和杂草稻，在杂草基因组特征的解析，杂草与水稻互作机制的阐明，杂草起源演化规律的揭示等方面开展工作，取得了系列原创性成果。包括获得稗属高质量基因组，解析稗属多倍化基因组演化机制，阐明稗草拟态遗传机制，揭示稗草抑制水稻分子机制，弄清杂草稻起源方式。研究结果为杂草绿色防控控、抑草水稻品种培育提供重要理论指导，推动了杂草遗传资源挖掘利用，也丰富了作物起源演化认知。相关研究结果在 Nature 子刊、PNAS、Genome Biology、Trends in Plant Science、Molecular Plant 等发表多篇论文，产生了广泛的国际影响。 提名该成果为省自然科学奖一等奖。

代表性论文专著目录

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4. Ye Chu-Yu, Wei Tang, Dongya Wu, Lei Jia1, Jie Qiu, Meihong Chen, Lingfeng Mao, Feng Lin, Haiming Xu, Xiaoyue Yu, Yongliang Lu, Yonghong Wang, Kenneth M Olsen, Michael P. Timko, Longjiang Fan*. 2019. Genomic evidence of human selection on Vavilovian mimicry. Nature Ecology & Evolution, 3:1474–1482

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