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# Molecular Plant

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## Opinions

- 1401**    **Blue revolution for food security under carbon neutrality: A case from the water-saving and drought-resistance rice**

Hui Xia, Xianxian Zhang, Yi Liu, Junguo Bi, Xiaosong Ma, Anning Zhang, Hongyan Liu, Liang Chen, Sheng Zhou, Huan Gao, Kai Xu, Haibin Wei, Guolan Liu, Feiming Wang, Hongyang Zhao, Xingxing Luo, Danping Hou, Qiaojun Lou, Fangjun Feng, Liguozhou, Shoujun Chen, Ming Yan, Tianfei Li, Mingshou Li, Lei Wang, Zaochang Liu, Xinqiao Yu, Hanwei Mei, and Lijun Luo

- 1405**    **When domestication bottleneck meets weed**

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- 1412**    **An unprecedented one-arrow-two-hawks strategy achieves high yield with early flowering in rice**

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- 1415**    **Reversible acetylation fine-tunes plant hormone signaling and immunity**

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- 1418**    **DeepBSA: A deep-learning algorithm improves bulked segregant analysis for dissecting complex traits**

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- 1428**    **Wheat male-sterile 2 reduces ROS levels to inhibit anther development by deactivating ROS modulator 1**

Jie Liu, Chuan Xia, Huixue Dong, Pan Liu, Ruizhen Yang, Lichao Zhang, Xu Liu, Jizeng Jia, Xiuying Kong, and Jiaqiang Sun

- 1440**    **Comparative genomic and transcriptomic analyses uncover the molecular basis of high nitrogen-use efficiency in the wheat cultivar Kenong 9204**

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- 1457**    **A potato late blight resistance gene protects against multiple *Phytophthora* species by recognizing a broadly conserved RXLR-WY effector**

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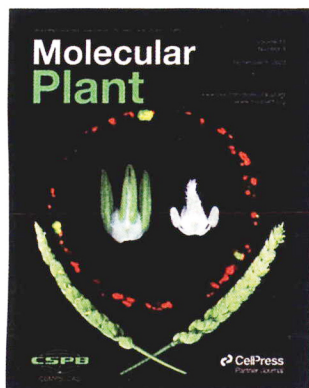
- 1470**    **An MCIA-like complex is required for mitochondrial complex I assembly and seed development in maize**

*Gang Wang, Yongyan Wang, Jiacheng Ni, Rongrong Li, Fengling Zhu, Ruyin Wang, Qiuzhen Tian, Qingwen Shen, Qinghua Yang, Jihua Tang, Monika W. Murcha, and Guifeng Wang*

#### Research Report

- 1488**    **Osmoregulation determines sperm cell geometry and integrity for double fertilization in flowering plants**

*Shu-Yan Chen, Lan Wang, Peng-Fei Jia, Wei-Cai Yang, Heven Sze, and Hong-Ju Li*



#### On the cover:

The Taigu male-sterile wheat line is a unique and precious male-sterile genetic resource that has been widely used in wheat breeding programs in China. The anther development of this male-sterile mutant line is arrested at the early stage, which is caused by anther-specific activation of *Ms2*. The mitochondria-localized *Ms2* protein reduces the accumulation of reactive oxygen species (ROS) in anthers and consequently terminates wheat anther development through direct interaction with the mitochondria-localized wheat ROS modulator 1 (*TaRomo1*). The cover image illustrates the localization of *Ms2* (indicated by the merged yellow signals) in the mitochondria, in which the wild-type wheat (left) and *ms2* mutant anthers (right) are shown. The images and cover caption were provided by Jiaqiang Sun, Chuan Xia, and Jie Liu. The cover was designed and processed by Juanying Ye.





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