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# Molecular Plant

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# Molecular Plant

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## Editor's Highlight

**1827** Ligand deprivation activates receptor signaling

Chun-Lin Shi and Liuji Wu

## Spotlights

**1828** An epic war between an oomycete pathogen and plants

Huan Wang, Youhuang Xiang, Daowen Wang, and Zheng Qing Fu

**1831** Intracellular phosphate sensing in plants

Guojie Ma, Viswanathan Satheesh, and Mingguang Lei

**1834** Improving disease resistance to rice false smut without yield penalty by manipulating the expression of effector target

Qiong Wang and Yoji Kawano

**1838** Adenylate cyclase activity of TIR1/AFB links cAMP to auxin-dependent responses

Aloysius Wong, Xuechen Tian, Yixin Yang, and Chris Gehring

## Resource Article

**1841** WGD: A user-friendly toolkit for evolutionary analyses of whole-genome duplications and ancestral karyotypes

Pengchuan Sun, Beibei Jiao, Yongzhi Yang, Lanxing Shan, Ting Li, Xiaonan Li, Zhenxiang Xi, Xiyin Wang, and Jianquan Liu

## Research Articles

**1852** Differentiation trajectories and biofunctions of symbiotic and un-symbiotic fate cells in root nodules of *Medicago truncatula*

Qinyi Ye, Fugui Zhu, Fanghao Sun, Tai-Cheng Wang, Jiale Wu, Peng Liu, Chen Shen, Jiangli Dong, and Tao Wang

**1868** Cell-specific pathways recruited for symbiotic nodulation in the *Medicago truncatula* legume

Sergio Alan Cervantes-Pérez, Sandra Thibivilliers, Carole Laffont, Andrew D. Farmer, Florian Frugier, and Marc Libault

**1889** G protein controls stress readiness by modulating transcriptional and metabolic homeostasis in *Arabidopsis thaliana* and *Marchantia polymorpha*

Ting-Ying Wu, Shalini Krishnamoorthi, Kulaporn Boonyaves, Isam Al-Darabsah, Richalynn Leong, Alan M. Jones, Kimitsune Ishizaki, Kang-Ling Liao, and Daisuke Urano

**1908** An  $\alpha/\beta$  hydrolase family member negatively regulates salt tolerance but promotes flowering through three distinct functions in rice

You-Huang Xiang, Jia-Jun Yu, Ben Liao, Jun-Xiang Shan, Wang-Wei Ye, Nai-Qian Dong, Tao Guo, Yi Kan, Hai Zhang, Yi-Bing Yang, Ya-Chao Li, Huai-Yu Zhao, Hong-Xiao Yu, Zi-Qi Lu, and Hong-Xuan Lin

**1931** SH3P2, an SH3 domain-containing protein that interacts with both Pib and AvrPib, suppresses effector-triggered, Pib-mediated immunity in rice

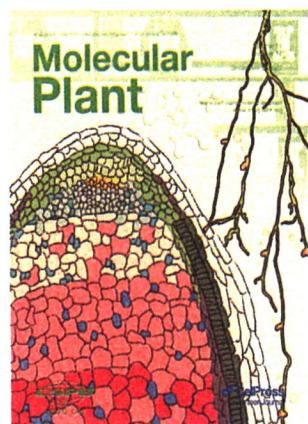
Yunjie Xie, Yupeng Wang, Xiangzhen Yu, Yuelong Lin, Yongsheng Zhu, Jinwen Chen, Hongguang Xie, Qingqing Zhang, Lanning Wang, Yidong Wei, Yanjia Xiao, Qihua Cai, Yanmei Zheng, Mo Wang, Huan Xie, and Jianfu Zhang

**1947 Submergence promotes auxin-induced callus formation through ethylene-mediated post-transcriptional control of auxin receptors**

*Seung Yong Shin, Yuri Choi, Sang-Gyu Kim, Su-Jin Park, Ji-Sun Park, Ki-Beom Moon, Hyun-Soon Kim, Jae Heung Jeon, Hye Sun Cho, and Hyo-Jun Lee*

**1962 The ferroxidases LPR1 and LPR2 control iron translocation in the xylem of *Arabidopsis* plants**

*Zhong-Rui Xu, Mei-Ling Cai, Ying Yang, Ting-Ting You, Jian Feng Ma, Peng Wang, and Fang-Jie Zhao*



**On the cover:**

The cover image illustrates an analogical factory of “symbiotic nitrogen fixation” in leguminous plants. Root nodules of leguminous plants are symbiotic organs that fix gaseous nitrogen. Nodule cells are highly heterogeneous, symbolizing different workshops in a factory that perform different functions to complete the production, processing and packaging of products (such as amino acids). The processing lines and administrative departments interconnect and cooperate to maintain the operation of the symbiotic organ and support the development of the whole plant. Image by: Qinyi Ye and Yizheng Wang.

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