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**On the Cover:** Reactions of diverse plant genotypes to bacterial effector proteins. Pathogenesis by bacterial plant pathogens involves injection of effector proteins into host cells using the type III secretion apparatus. These effector proteins may enhance the pathogen's virulence; however, their recognition by the host triggers resistance responses that are often associated with rapid cell death (the hypersensitive response). The repertoire of effector-encoding genes in potential pathogens and the spectrum of recognition specificities in the host determine compatibility and drive continuous plant-pathogen coevolution. Genes encoding effector proteins can be exchanged by horizontal transfer between strains, resulting in exposure of plant germplasm to overlapping subsets of effectors. In this issue, Wroblewski et al. (pp. 1733–1749) analyzed the reaction of 59 accessions representing four plant families to 171 effector proteins from multiple strains of *Pseudomonas* and *Ralstonia* spp. using *Agrobacterium*-mediated transient assays. Nonhosts often reacted to effectors from nonpathogens. The far right column shows a gradient of reactions to four effector proteins in *Nicotiana benthamiana* with the strongest response, severe necrosis, at the top; the remaining eight images show a variety of reactions in lettuce, tomato, and pepper.

## FOCUS ISSUE ON PLANT INTERACTIONS WITH BACTERIAL PATHOGENS

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- [C][W][OA] *AINTEGUMENTA* and *AINTEGUMENTA-LIKE6* Act Redundantly to Regulate Arabidopsis Floral Growth and Patterning. *Beth A. Krizek* 1916
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- [W][OA] The Magnesium-Chelatase H Subunit Binds Abscisic Acid and Functions in Abscisic Acid Signaling: New Evidence in Arabidopsis. *Fu-Qing Wu, Qi Xin, Zheng Cao, Zhi-Qiang Liu, Shu-Yuan Du, Chao Mei, Chen-Xi Zhao, Xiao-Fang Wang, Yi Shang, Tao Jiang, Xiao-Feng Zhang, Lu Yan, Rui Zhao, Zi-Ning Cui, Rui Liu, Hai-Li Sun, Xin-Ling Yang, Zhen Su, and Da-Peng Zhang* 1940

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- [W] Diversity in Expression Patterns and Functional Properties in the Rice HKT Transporter Family. *Mehdi Jabnourne, Sandra Espeout, Delphine Mieulet, Cécile Fizames, Jean-Luc Verdeil, Geneviève Conjéto, Alonso Rodríguez-Navarro, Hervé Sentenac, Emmanuel Guiderdoni, Chedly Abdelly, and Anne-Aliénor Véry* 1955
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- [C][W][OA] Turnover of Fatty Acids during Natural Senescence of Arabidopsis, *Brachypodium*, and Switchgrass and in Arabidopsis  $\beta$ -Oxidation Mutants. *Zhenle Yang and John B. Ohlrogge* 1981
- [W] The Rice Aquaporin Lsi1 Mediates Uptake of Methylated Arsenic Species. *Ren-Ying Li, Yukiko Ago, Wen-Ju Liu, Namiki Mitani, Jörg Feldmann, Steve P. McGrath, Jian Feng Ma, and Fang-Jie Zhao* 2071

## GENETICS, GENOMICS, AND MOLECULAR EVOLUTION

- [OA] Transcriptional Gene Silencing Mediated by a Plastid Inner Envelope Phosphoenolpyruvate/Phosphate Translocator CUE1 in Arabidopsis. *Jie Shen, Xiaozhi Ren, Rui Cao, Jun Liu, and Zhizhong Gong* 1990
- [W] Expansion Mechanisms and Functional Annotations of Hypothetical Genes in the Rice Genome. *Shu-Ye Jiang, Alan Christoffels, Rengasamy Ramamoorthy, and Srinivasan Ramachandran* 1997

## PLANTS INTERACTING WITH OTHER ORGANISMS

- [C][OA] Negative Regulation of Systemic Acquired Resistance by Replication Factor C Subunit3 in Arabidopsis. *Shitou Xia, Zhaohai Zhu, Lin Hao, Jin-Gui Chen, Langtao Xiao, Yuelin Zhang, and Xin Li* 2009
- [C][W][OA] Truffles Regulate Plant Root Morphogenesis via the Production of Auxin and Ethylene. *Richard Splivallo, Urs Fischer, Cornelia Göbel, Ivo Feussner, and Petr Karlovsky* 2018

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