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.
Dissection of Bacterial Wilt on Medicago truncatula Revealed Two Type III Secretion System Effectors Acting on Root Infection Process and Disease Development. Marie Turner, Alain Jauneau, Stéphane Genin, Marie-José Tavella, Fabienne Vaillieu, Laurent Gentzbittel, and Marie-Françoise Jardinaud

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Comparative Large-Scale Analysis of Interactions between Several Crop Species and the Effector Repertoires from Multiple Pathovars of Pseudomonas and Ralstonia. Tadeusz Wroblewski, Katherine S. Caldwell, Urszula Piskurewicz, Keri A. Cavanaugh, Huaiqing Xu, Alexander Kozik, Oswaldo Ochoa, Leah K. McHale, Kirsten Lahre, Joanna Jelenska, Jose A. Castillo, Daniel Blumenthal, Boris A. Vinatzer, Jean T. Greenberg, and Richard W. Michelmore

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