

T H E
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ON THE COVER



Plants resist pathogen infection with a multilayered defense strategy. Lectins are believed to serve as defensive molecules, but their precise roles have remained unclear. Yamaji et al. (pages 778–793) cloned the novel virus-resistance gene *JAX1* from *Arabidopsis thaliana*, which encodes a lectin-like protein with similarity to another virus-resistance protein, RTM1. However, *JAX1*-mediated resistance differs from other well-characterized virus-resistance machineries such as *R* gene-mediated resistance involving hypersensitive responses or RNA silencing. Whereas RTM1 functions to inhibit viral long-distance movement, *JAX1* inhibits viral proliferation at the cellular level. The characterization of *JAX1*-mediated resistance demonstrates the generality and significance of lectin-mediated resistance to plant viruses. The cover displays the systemic spread of green fluorescent protein fluorescence monitoring virus infection in a wild-type plant (bottom) and strict inhibition of virus infection in a *JAX1*-expressing transgenic plant (top).

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
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

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