

The electronic form of this issue, available as of September 11, 2007, at www.plantphysiol.org, is considered the journal of record.

On the Cover: Many plants use self-incompatibility (SI) to reject genetically identical (“self”) pollen to prevent inbreeding. In *Papaver rhoeas* (the field poppy), SI triggers a Ca²⁺-dependent signaling network in incompatible pollen, involving several targets, including actin depolymerization and phosphorylation of soluble inorganic pyrophosphatases. Pollen tube inhibition and programmed cell death (PCD) result. A mitogen-activated protein kinase (MAPK), p56, activated by SI, had been previously identified, but its role was not known. In this issue, Li et al. (pp. 236–245) establish a link between the SI-activated MAPK and initiation of PCD in incompatible *Papaver* pollen. Their data implicate MAPK involvement in regulating SI-induced caspase-3-like/DEVDase activation and progression of PCD in incompatible pollen. Although MAPK signaling in PCD is well established, it has not previously been shown to be involved in SI. The cover photograph shows a flower of *P. rhoeas* (var. Shirley) being pollinated by a bee. The image was created by Noni Franklin-Tong.

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^[C] Some figures in this article are displayed in color online but in black and white in the print edition.

^[W] Indicates Web-only data.

^[OA] Open Access articles can be viewed online without a subscription.