ON THE COVER

In the Brassicaceae, compatible pollen-pistil interactions result in pollen adhesion to the stigma, whereas pollen grains from unrelated plant species are rejected. The incompatible response involves the E3 ubiquitin ligase ARC1. Samuel et al. (pages 2655–2671) identified Brassica napus Exo70A1 as an interacting partner with ARC1 and show that loss of the protein in Brassica and Arabidopsis stigmas leads to rejection of compatible pollen. Exo70A1 is a putative component of the exocyst complex, which is known to regulate polarized secretion. A red fluorescent protein (RFP):Exo70A1 fusion protein rescued the stigma defect in Arabidopsis and was mobilized to the plasma membrane in stigma tissue concomitant with flower opening. The authors show that Exo70A1 is required in the stigma for the acceptance of compatible pollen in Brassica and Arabidopsis and negatively regulated during the self-incompatible response in Brassica. The cover image shows RFP:Exo70A1 localized to the plasma membrane of an unpollinated mature stigma.

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