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MYROSIN CELL DEVELOPMENT DEPENDS ON PIN1 LOCALIZATION

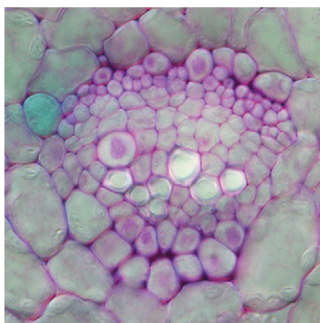
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ON THE COVER



The myrosinase-glucosinolate defense system is characteristic of the Brassicaceae. Myrosinase accumulates and is sequestered in vacuoles of myrosin cells, while glucosinolates accumulate in adjacent cells or cellular compartments. When these cells are ruptured by herbivores, the myrosinase reacts with glucosinolates to produce toxic compounds. Myrosin cells form specifically along leaf veins in *Arabidopsis*, but the mechanism underlying their formation is unknown. Shirakawa et al. (pages 4448–4461) show that myrosin cell development requires the endocytosis-mediated polar localization of the auxin-efflux carrier PIN1 in leaf primordia. The authors propose that the arrangement of myrosin cells near vascular cells via polar PIN1 localization might protect this essential transport system from herbivore damage. The cover shows a cross section of GUS-stained rosette leaves of wild-type plants expressing the myrosin cell marker *MYR001:GUS*. Myrosin cells specifically develop side by side with both procambium and phloem.

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