

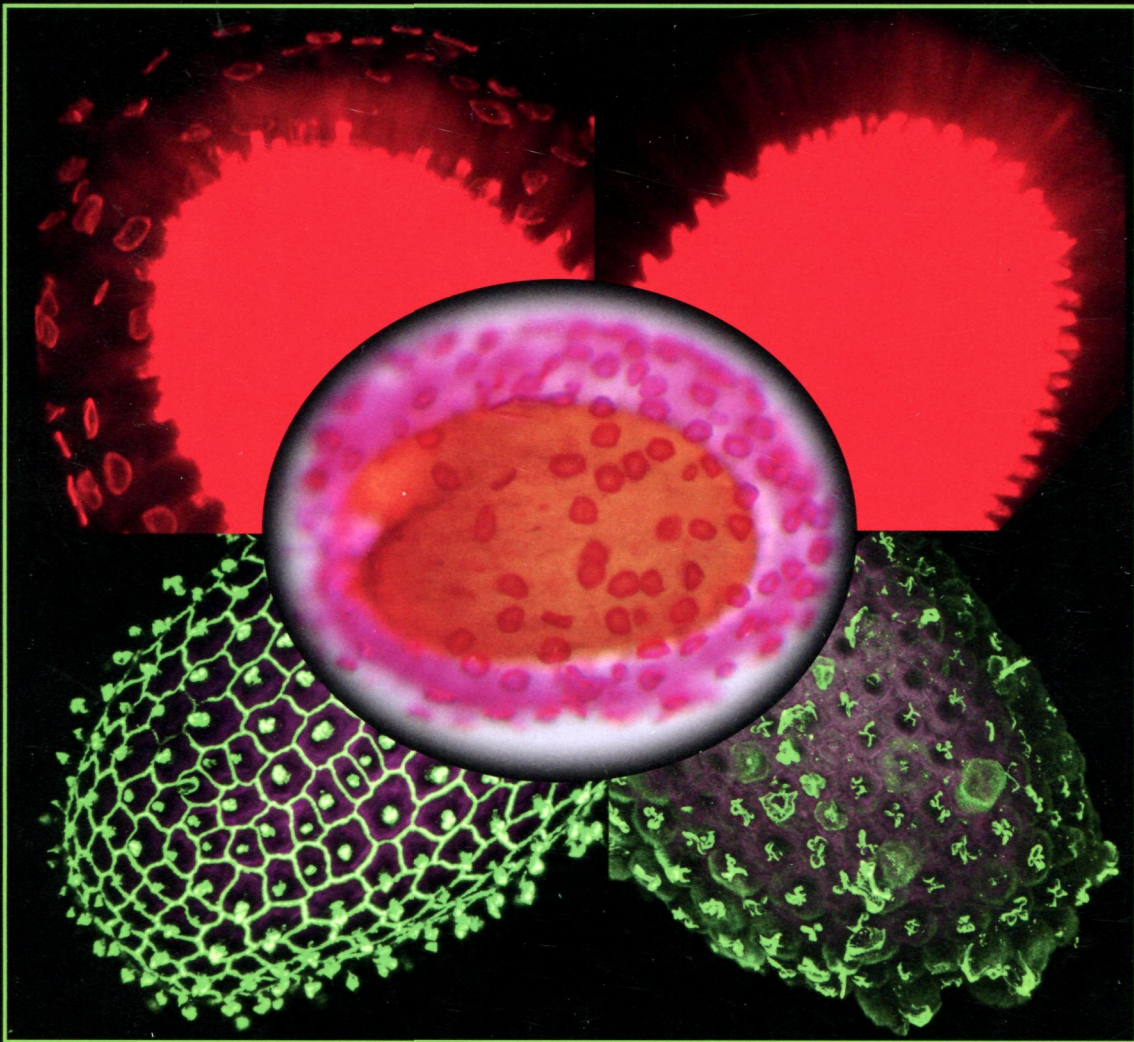
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T H E  
**PLANT**  
C E L L



**FLYING SAUCER1 REGULATES SEED MUCILAGE PROPERTIES**

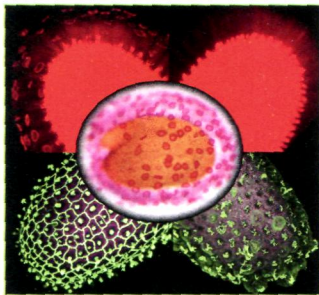
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**ON THE COVER**



Pectins form the gel matrix of the primary cell wall and are abundant in the middle lamella that holds plant cells together. The *Arabidopsis* seed coat epidermis has distinct properties that facilitate the study of cell wall components, particularly pectin, and analysis of seed mucilage mutants has led to the identification of several genes involved in the biosynthesis of cell wall components. Voiniciuc et al. (pages 944–959) characterize *flying saucer1* (*fly1*), an *Arabidopsis* seed coat mutant that displays primary wall detachment, reduced mucilage extrusion, and increased mucilage adherence, and show that *FLY1* is a transmembrane protein that positively regulates the degree of pectin methylesterification in seed mucilage through a mechanism mediated by ubiquitin. The cover shows images of seed with mucilage labelled in three different ways. The top two panels show *fly1* mutant (left) and Columbia-2 wild-type (right) seed stained with the cellulose stain Pontamine S4B. The *fly1* mutant seed in the middle panel was stained with the pectin dye ruthenium red. The bottom two panels show wild-type (left) and *fly1-1* (right) seed labelled with an antibody that recognizes unesterified homogalacturonan cross-linked by calcium bridges.

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<sup>C</sup> Some figures in this article are displayed in color online but in black and white in the print edition.

<sup>W</sup> Online version contains Web-only data.

<sup>OA</sup> Open Access articles can be viewed online without a subscription.



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