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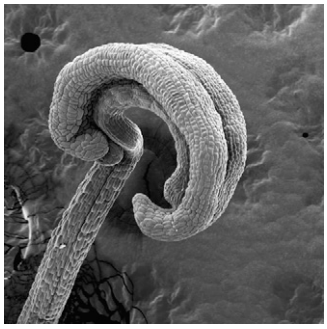
ON THE COVER



The mechanisms underlying the polarity establishment in the stamen remain unclear, although those in the leaf are well understood. Toriba et al. (pages 1452–1462) characterized a *rod-like lemma* (*rol*) mutant of rice (*Oryza sativa*), in which the development of the stamen and lemma is severely compromised. The *rol* phenotype was found to be the result of a weak loss-of-function mutation in *SHOOTLESS2*, which encodes an RNA-dependent RNA polymerase and functions in *trans*-acting small interfering RNA (ta-siRNA) production. Thus, ta-siRNA likely plays an important role in regulating the adaxial-abaxial polarity of floral organs in rice. The authors present a detailed description of stamen development using in situ gene expression analysis and scanning electron microscopy and propose a new model for the establishment of adaxial-abaxial polarity in the stamen. The cover shows a scanning electron microscopy image of a partially abaxialized stamen with only one theca in the *rol* mutant.

IN BRIEF

RESEARCH ARTICLES

Jigyasa H. Tuteja, Gracia Zabala, Kranthi Varala, Matthew Hudson, and Lila O. Vodkin (2009) Endogenous, Tissue-Specific Short Interfering RNAs Silence the Chalcone Synthase Gene Family in *Glycine max* Seed Coats. Plant Cell 21: 3063–3077.

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

W Online version contains Web-only data.

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

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