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ON THE COVER: Our understanding of the mechanisms of auxin action, which is central in patterning plant tissues, has been progressed rapidly in recent years. The distribution of auxin is regulated by the direction of auxin flow established by auxin efflux carriers that show polarized distribution in cells. PINOID, a serine threonine protein kinase in *Arabidopsis* controls auxin distribution through a positive control of sub-cellular localization of PIN auxin efflux carriers. Morita and Kyojuka (pp. 541–550) identified and characterized *OsPID*, the PINOID ortholog of rice. Abnormalities observed in the plants that over-express *OsPID* could be phenocopied by treatment with an inhibitor of active polar transport of auxin. Thus, *OsPID* is probably involved in the control of polar auxin transport in rice. Analysis of *OsPID* mRNA distribution showed a complex pattern in shoot meristems indicating that it possibly plays a role in the pattern formation and organogenesis in the rice shoot. The cover photograph shows spatial distribution of *OsPID* mRNA in the rice inflorescence at primary branch initiation stage.