Lignins are highly complex polymers in plant cell walls formed by precursor monolignols. Peroxidases are known to be involved in lignin polymerization. Now, Berthet et al. (pages 1124–1137) show using mutational analysis that two laccases, LAC4 and LAC17, participate in the polymerization of lignins in Arabidopsis stems. These findings suggest that the genetic engineering of lignin-specific laccases is a potential tool for the fine-tuning of lignin content and structure. The cover shows a cross section from wild-type Arabidopsis stem tissue stained with Maule reagent to show syringyl lignin content.

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