Photoperiodic floral initiation involves a leaf-derived signal, termed florigen, which is transported in the phloem and acted upon by meristematic cells within the shoot apex. On pages 1488–1506, Lin et al. present an analysis of the phloem sap collected from photoperiodically induced and noninduced cucurbit species that shows that the presence of FT-Like protein, but not FT-Like mRNA, is highly correlated with the onset of flowering. The use of the normally day-neutral Cucurbita system for this analysis depended on the isolation of an obligate short-day accession, which was found in the undomesticated species C. moschata. The cover image shows a flowering C. moschata plant, overlaid by mass spectrometry traces of the two FT-like proteins with florigenic activity found in the phloem sap.

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