ON THE COVER

The fleshy expansion and ripening of fruits make them attractive to seed-dispersing organisms, including humans. Using RNA interference gene repression and ectopic over-expression, Vrebalov et al. (pages 3041–3062) show that TAGL1, the tomato ortholog of Arabidopsis SHATTER-PROOF (SHP) MADS-box genes, is necessary for both ripening and fleshy expansion of tomato. SHP1 and SHP2 are necessary for silique shattering in Arabidopsis. This indicates broad functional conservation of these genes (a role in seed dispersal) among very different fruit types, but evolution of distinct molecular functions for these MADS-box orthologs in different species, namely fruit expansion and ripening in tomato and pod shatter in Arabidopsis (photo by Ryan McQuinn).

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