On the Cover: Detection of the diurnal environment requires a circadian system that is correctly integrated with the light-dark cycle. EARLY FLOWERING4 (ELF4) is required to fulfill this normal circadian function. McWatters et al. (pp. 391–401) have shown that ELF4 has two functions within the clock. ELF4 was found to be a circadian element required both for clock resetting at the evening phase of the day (the light-to-dark phase of entrainment), and it was also found to be required for persistence of clock oscillations. For the latter, ELF4 was found to be a dose-dependent activator of the morning clock genes CCA1 and LHY. ELF4 is thus a core component of the circadian oscillator. The cover cartoon illustrates a plant having trouble sleeping. This caricature is indicative of elf4 mutant defects in detecting dusk. The cartoon was drawn by Prof. Dr. Edward Himelblau at California Polytechnic State University.
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