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On the Cover: Functional genomics tools for maize (*Zea mays*) have increased significantly over the last decade with the availability of the maize genome sequence. In addition to reverse genetics and other resources, over 100 stable transgenic reporter lines using fluorescent markers have now been produced and disseminated in the public sector (http://maize.jcvi.org/cellgenomics). Transient expression methods are still needed in maize to optimize use of these reporter lines, to develop rapid experimental tools for live cell imaging, and to study protein localization during growth and development. Capitalizing on the developmental gradient of the maize leaf, Kirienko et al. (pp. 1309–1318) report here on a reliable method of transient expression in growing regions of maize leaves. The method replaces heterologous expression assays with a more direct, native, and informative system in which marker proteins can be expressed and studied in vivo. The method relies on minimal dissection procedures to access expanding zones of the leaf. The cover picture shows a single cell in the maize blade epidermis successfully transformed using this method. The leaf tissue was bombarded with a marker construct for a protein localized in the Golgi and tagged with a red fluorescent protein (polyubiquitin:: ZmXylT-mRFP). The crenulated maize epidermal cell shows predicted punctate red fluorescence as expected for this reporter. The blue color is due to cell wall autofluorescence, which serves as a useful counterpoint to outline the cell containing the red fluorescence. The magenta color combines the blue cell wall with red autofluorescence of chloroplasts in the guard cells. Photo credit: Daniel R. Kirienko and Carolyn Rasmussen.

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