Patterns of Auxin Transport and Gene Expression during Primordium Development Revealed by Live Imaging of the *Arabidopsis* Inflorescence Meristem

Marcus G. Heisler, Carolyn Ohno, Pradeep Das, Patrick Sieber, Gonehal V. Reddy, Jeff A. Long, and Elliot M. Meyerowitz

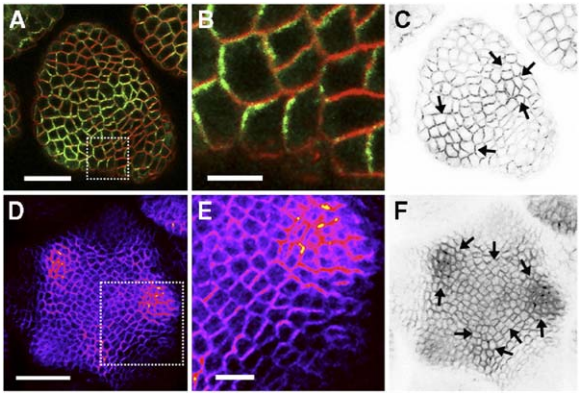

Figure S1. PIN1-GFP Localization Analysis

(A) Confocal optical section of a fixed, *pPIN1::PIN1-GFP* (green)-expressing meristem counterstained with FM4-64 (red) viewed under a coverslip using a 1.4NA 63× objective lens. Scale bar, 20 μm.

(B) Closeup of boxed region in (A) showing localization of *pPIN1::PIN1-GFP* in arcs of signal around cell corners. Scale bar, 5 μm.

(C) Overall direction of auxin transport deduced from the examination of *pPIN1::PIN1-GFP* subcellular localization in (A).

(D) Maximum intensity projection of a confocal image stack of a *pPIN1::PIN1-GFP*-expressing meristem collected using a 0.9NA 63× dipping lens. Scale bar, 50 μm.

(E) Closeup of (D) showing arcs of signal similar to that shown in (B).

(F) Overall pattern of transport deduced from signal arcs is the same as that deduced by high-resolution analysis in (C). Scale bar, 10 μm.

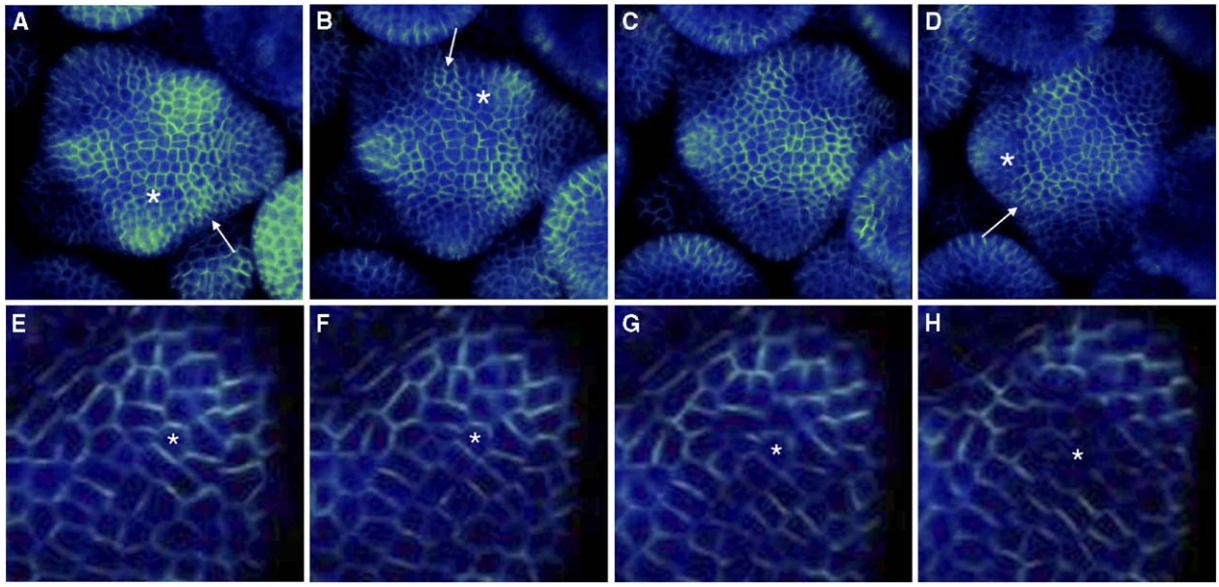

Figure S2. PIN1-GFP Expression and Polarity Dynamics

(A–D) Selected frames from Movie S1. Arrows indicate sites of newly localized *pPIN1::PIN1-GFP* expression marking incipient primordia. Asterisks mark regions adaxial to older primordia where *pPIN1::PIN1-GFP* expression is decreasing following a PIN1-GFP polarity reversal. Note these two events are correlated in time. (A) 6 hr, (B) 16 hr, (C) 26 hr, (D) 38 hr. Times are given relative to the start of Movie S1.

(E and F) Magnified views of PIN1-GFP polarity reversal within a primordium from selected consecutive frames in Movie S2. Asterisk marks a single, static cell located within the region in which *pPIN1::PIN1-GFP* expression decreases. Note that the *pPIN1::PIN1-GFP* expression pattern shifts relative to the underlying cells in a direction correlated with PIN1-GFP polarity.