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Supplemental Material to:

Victoria K. Schulman, Eric S. Folker, Mary K. Baylies

A method for reversible drug delivery to internal tissues of *Drosophila* embryos

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Video S1: EB1 comets can be observed at all time points following LH/DMSO treatment.

Embryos expressing Twist-Gal4 and UAS-EB1-eYFP were treated with LH and DMSO for 20 min. The LH/DMSO solution was removed, and embryos were mounted on a gas-permeable membrane in halocarbon oil to permit oxygen exchange. Embryos were then imaged for a duration of 5 min at a frame rate of 5 seconds at each of three time points: 30 (left panel), 50 (middle panel), and 70 min (right panel) post LH/DMSO treatment. For each time point, 20 frames are displayed in the sequence. EB1 comets are visibly prominent at all three time points. Scale bar, 10 μm. Time, sec.

Video S2: EB1 comets can be observed at later time points following LH/Nocodazole treatment.

Embryos expressing Twist-Gal4 and UAS-EB1-eYFP were treated with LH and 66 nM Nocodazole in DMSO for 20 min. The LH/drug solution was removed, and embryos were mounted on a gas-permeable membrane in halocarbon oil to permit oxygen exchange. Embryos were then imaged for a duration of 5 min at a frame rate of 5 seconds at each of three time points: 30 (left panel), 50 (middle panel), and 70 min (right panel) post LH/drug treatment. For each time point, 20 frames are displayed in the sequence. As evidenced by its hazy appearance, EB1 is diffuse at 30 min post-treatment, and not concentrated in comets, indicating that microtubule polymerization is largely absent. At 50 min post drug treatment, EB1 comets are visible, indicating that the embryos are escaping Nocodazole inhibition and microtubule polymerization is resuming. Finally, at 70 min post drug treatment, EB1 comets are prominent as in control embryos, indicating that microtubule polymerization is restored and that LH-mediated drug treatment is reversible. Scale bar, 10 μm. Time, sec.