

Supplementary Material

Jared A. Talbot et al. doi: 10.1242/bio.20147583

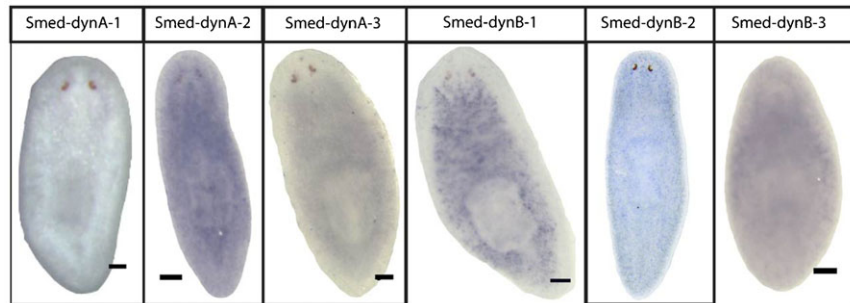


Fig. S1. *In situ* hybridization confirms effectiveness of RNAi treatment. WISH images for dynamins *smed-dynA-1(RNAi)*, *smed-dynA-2(RNAi)*, *smed-dynA-3(RNAi)*, *smed-dynB-1(RNAi)*, *smed-dynB-2(RNAi)* and *smed-dynB-3(RNAi)* after two (lethal phenotypes; 2fd7) and twelve RNAi feedings (12fd7). Scale bars: 100 μ m.

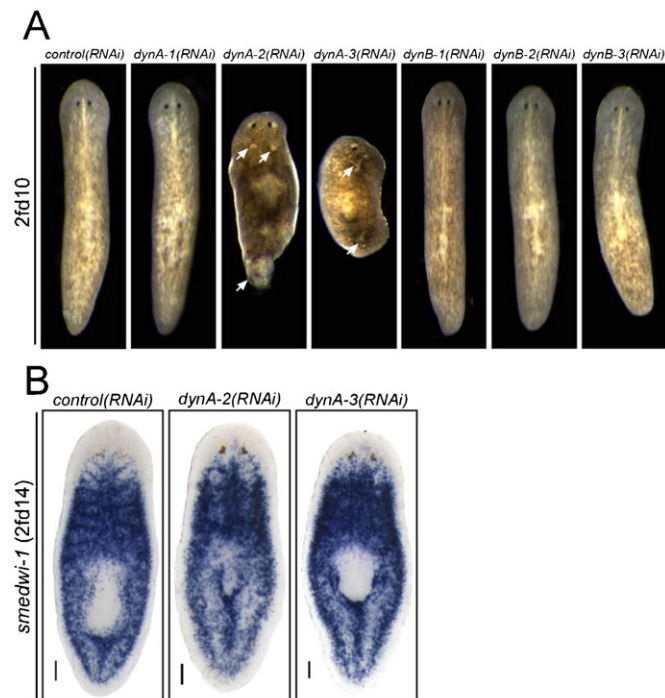
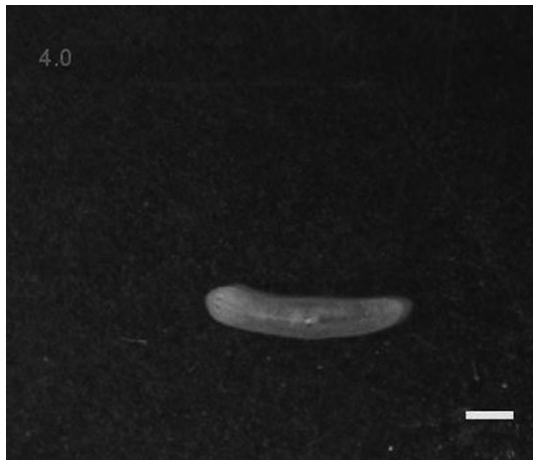
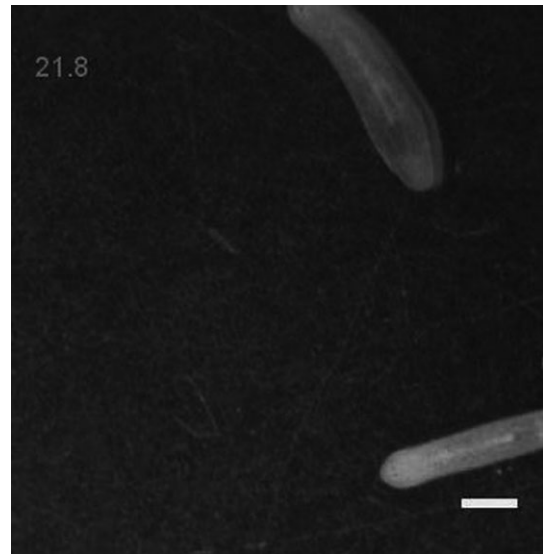


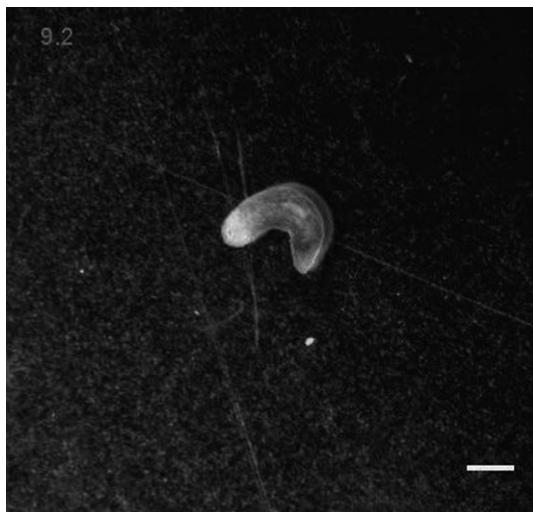
Fig. S2. Analysis of *dynamin(RNAi)* worms. (A) Tissue homeostasis defects are observed in *smed-dynA-2(RNAi)* and *smed-dynA-3(RNAi)* worms as lesions on the outer epithelium (white arrows). All worms were subjected to two RNAi feedings and live images were taken 10 days later (2fd10). (B) WISH images for the stem cell marker *smedwi-1* in *smed-dynA-2(RNAi)* and *smed-dynA-3(RNAi)* worms. Worms were examined 14 days after the second RNAi feeding (2fd14). All images are dorsal views with the anterior of the worm facing up. Scale bars: 100 μ m.



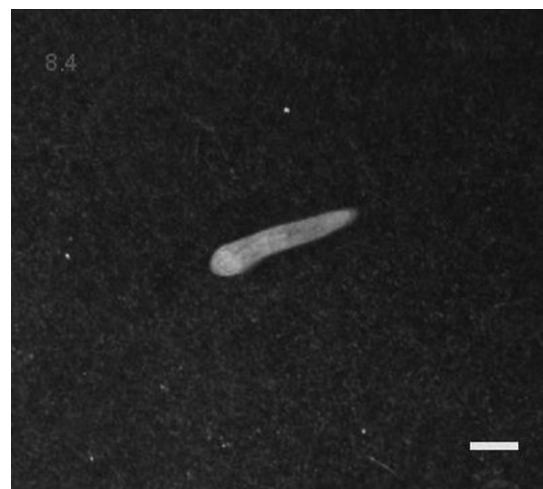
Movie 1. The locomotion of a *control(RNAi)* planarian acquired at 5 frames/sec. Real time is shown in top left corner. Scale bar: 1 mm.



Movie 3. The locomotion of a *smed-dynA-1(RNAi)* planarian acquired at 5 frames/sec. *smed-dynA-1(RNAi)* planarians display a mix of cilia-driven (supplementary material Movie 2) and musculature-driven (this movie) locomotion. Real time is shown in top left corner. Scale bar: 1 mm.



Movie 2. The locomotion of a *smed-dynA-1(RNAi)* planarian acquired at 5 frames/sec. *smed-dynA-1(RNAi)* planarians display a mix of cilia-driven (this movie) and musculature-driven (supplementary material Movie 3) locomotion. Real time is shown in top left corner. Scale bar: 1 mm.



Movie 4. The musculature driven locomotion of a wild-type planarian treated locally with 200 μ L of 200 μ M mianserin and acquired at 5 frames/sec. Real time is shown in top left corner. Scale bar: 1 mm.