Supplemental Materials

Molecular Biology of the Cell

Zaatri *et al.*

Supplement to Figure 2: Anterior-to-Posterior and binned velocities of septin loss of function cells

(A-C) Mean and variance (+/- one standard deviation) of circumferential velocities over time averaged across the anterior-posterior axis. (D-I) Posterior-directed velocities over time for *unc-59(RNAi)*, *unc-59(e1005)*, and *unc-61(e228)* cells (n = 12, n = 9, n = 6, respectively). Gold, green, blue and dashed colored lines indicate individuals of the corresponding color-coded phenotype; black: septin perturbation population average; purple: control average. (G-I) Mean and variance (+/- one standard deviation) of posterior-directed velocities over time averaged across the top-bottom axis. (J-L) Binned circumferential velocities. Populations and color denotations are the same as panels D-F. (M-O) Binned posterior-directed velocities. Populations and color denotations are the same as panels D-F.

Supplement to Figure 3: Controls for Figure 3

(A) Mean intensity ratio (A/P) of UNC-59::GFP just prior to anaphase onset for control and *cyk-1(RNAi)* cells. Dots are individuals; horizontal bar is population mean; vertical notches are 95% confidence interval; ns = not significantly different. (B-F) Photobleaching adjustment for CYK-1::GFP cells. (B) Averaged fluorescence intensity CYK-1::GFP in cells treated with azide (n=10) (B-C) Cortical fluorescence intensities over time in CYK-1::GFP control (C, n =12) and UNC-59 depleted (D, n = 5) cells. (E-F) Photobleaching-corrected CYK-1::GFP intensities for the same cells as in B and C. Movies were recorded on the same settings as those made to build the decay model in (B); the decay coefficient was used to calculate and add in the intensity that was lost to photobleaching.
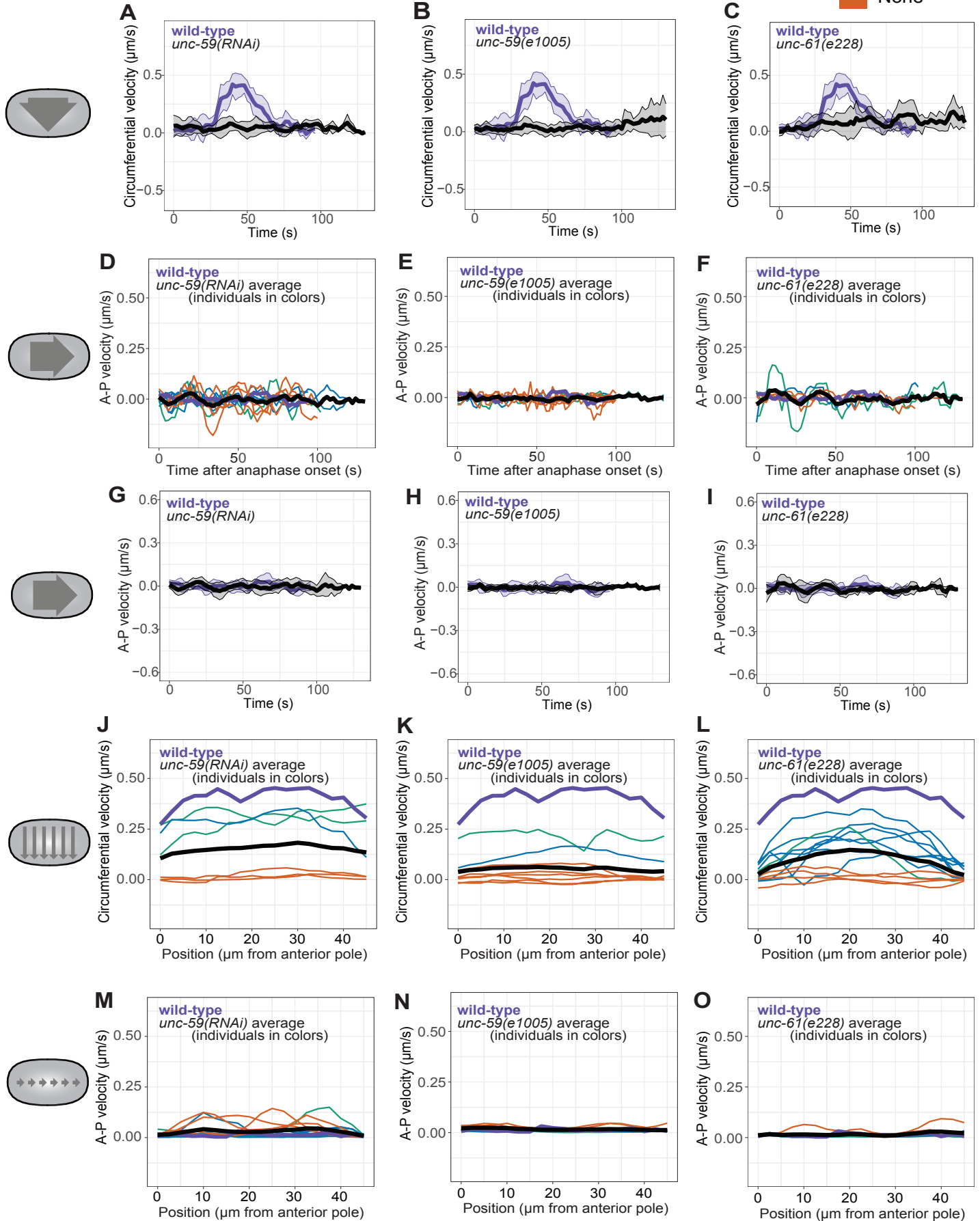

Supplement to Figure 4: AP and binned velocities for *CYK-1* loss of function cells

(A and B) Mean and variance (+/- one standard deviation) of circumferential velocities over time averaged across the anterior-posterior axis. (C-F) Posterior-directed velocities over time for *cyk-1(RNAi)* and (*cyk-1(RNAi)*; *unc-61*(e228)) populations (n = 10, n = 18). Brown: (*cyk-1(RNAi)*; *unc-61(e228)*) population average; purple: wild-type average; red: *cyk-1(RNAi)* average. (C and D) Gold, green, blue and dashed colored lines indicate individuals of the corresponding color-coded phenotype. (E and F) Mean and variance (+/- one standard deviation) of posterior-directed velocities over time averaged across the top-bottom axis. (G and H) Binned circumferential velocities. Populations and color denotations are the same as panels A-B. Dashed line indicates reversed handedness. (I and J) Binned posterior-directed velocities. Populations and color denotations are the same as panels A-B.
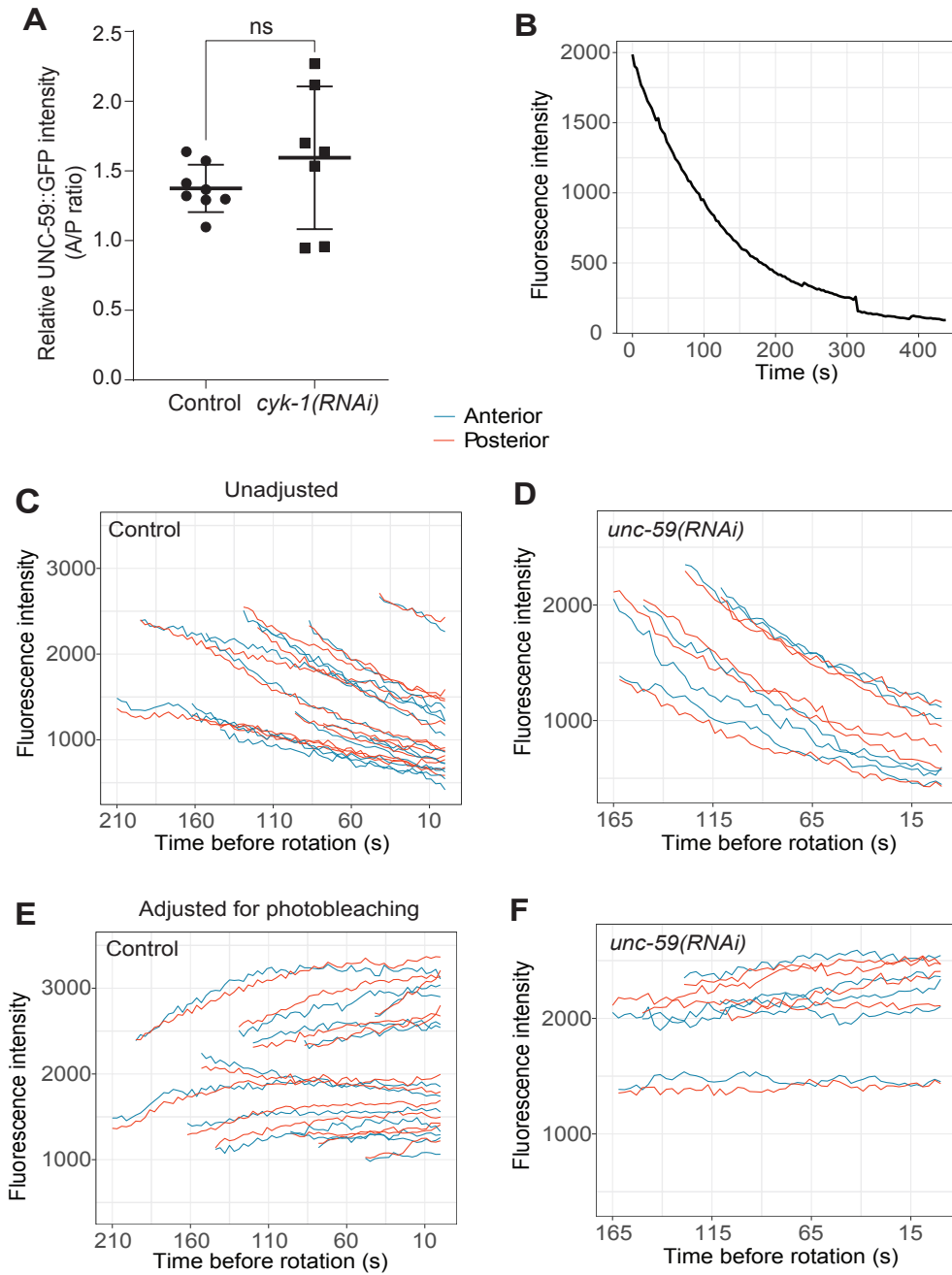
Zaatri et al Figure 2 Supplement

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A

ns

Relative UNC-59::GFP intensity (A/P ratio)

Control   *cyk-1(RNAi)*

B

Fluorescence intensity

Time (s)

— Anterior
— Posterior

C Unadjusted

Control

Fluorescence intensity

Time before rotation (s)

D

unc-59(RNAi)

Fluorescence intensity

Time before rotation (s)

E Adjusted for photobleaching

Control

Fluorescence intensity

Time before rotation (s)

F

unc-59(RNAi)

Fluorescence intensity

Time before rotation (s)

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