Figure S1

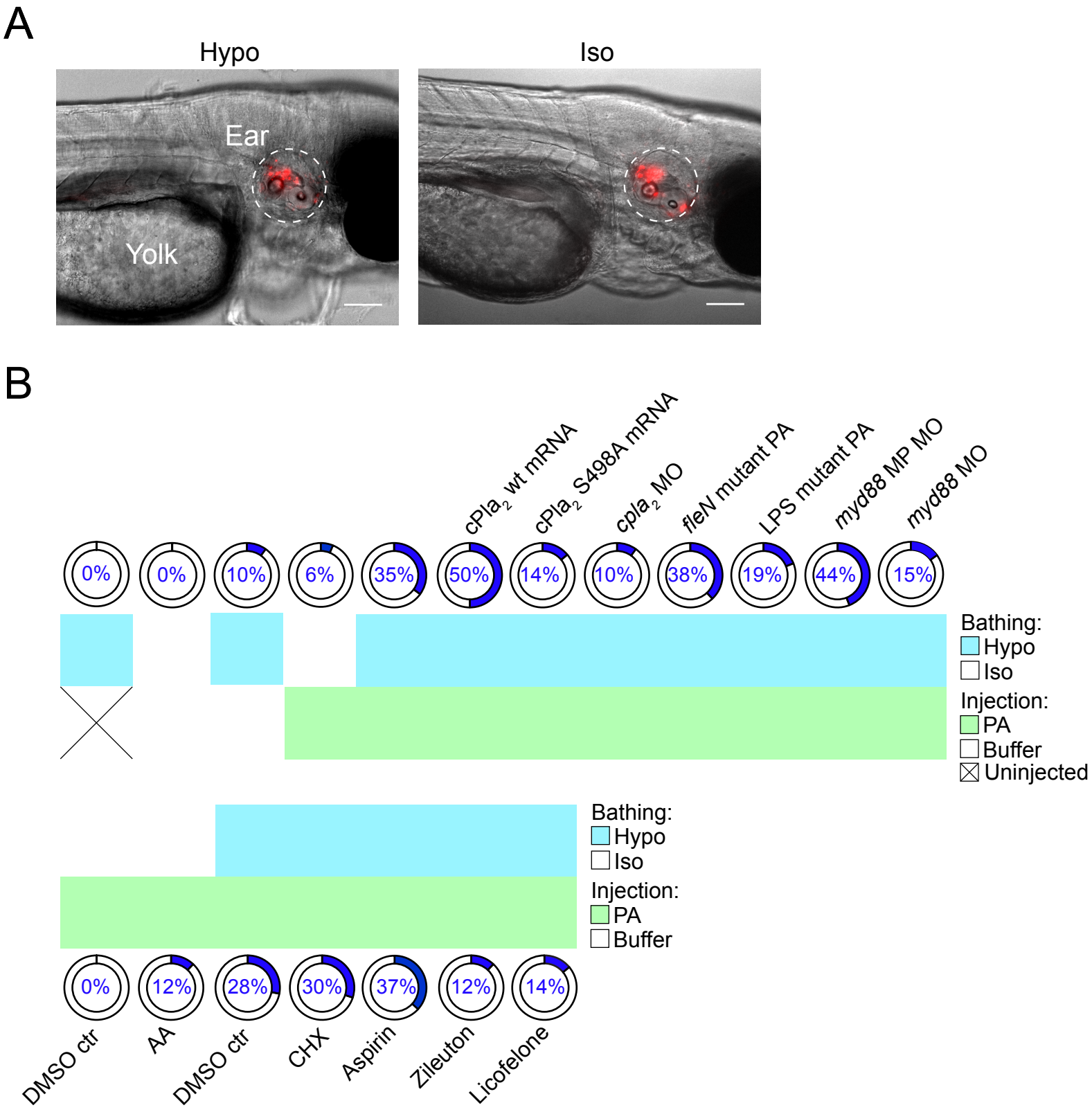

Figure S1. Related to Figure 1 and 5. (A) Images of injection-induced ear damage under hypotonic (left, representative of 36 injection experiments) and isotonic (right, representative of 12 injection experiments) bathing conditions. The nuclei of damaged cells are stained with the cell lysis dye SyTox Orange. Scale bars, 100 μm. **(B)** Phenotype classification by user-unsupervised (i.e., without manually selected training sets) Gaussian mixture distribution model-clustering. Blue numbers, HR-index. Middle panel shadings denote combinatorial experimental conditions as indicated on the right side. Note, data sets are the same as in other figures (e.g., Figure 5A, and S3). For experimental numbers, please also see Table S1.

Figure S2

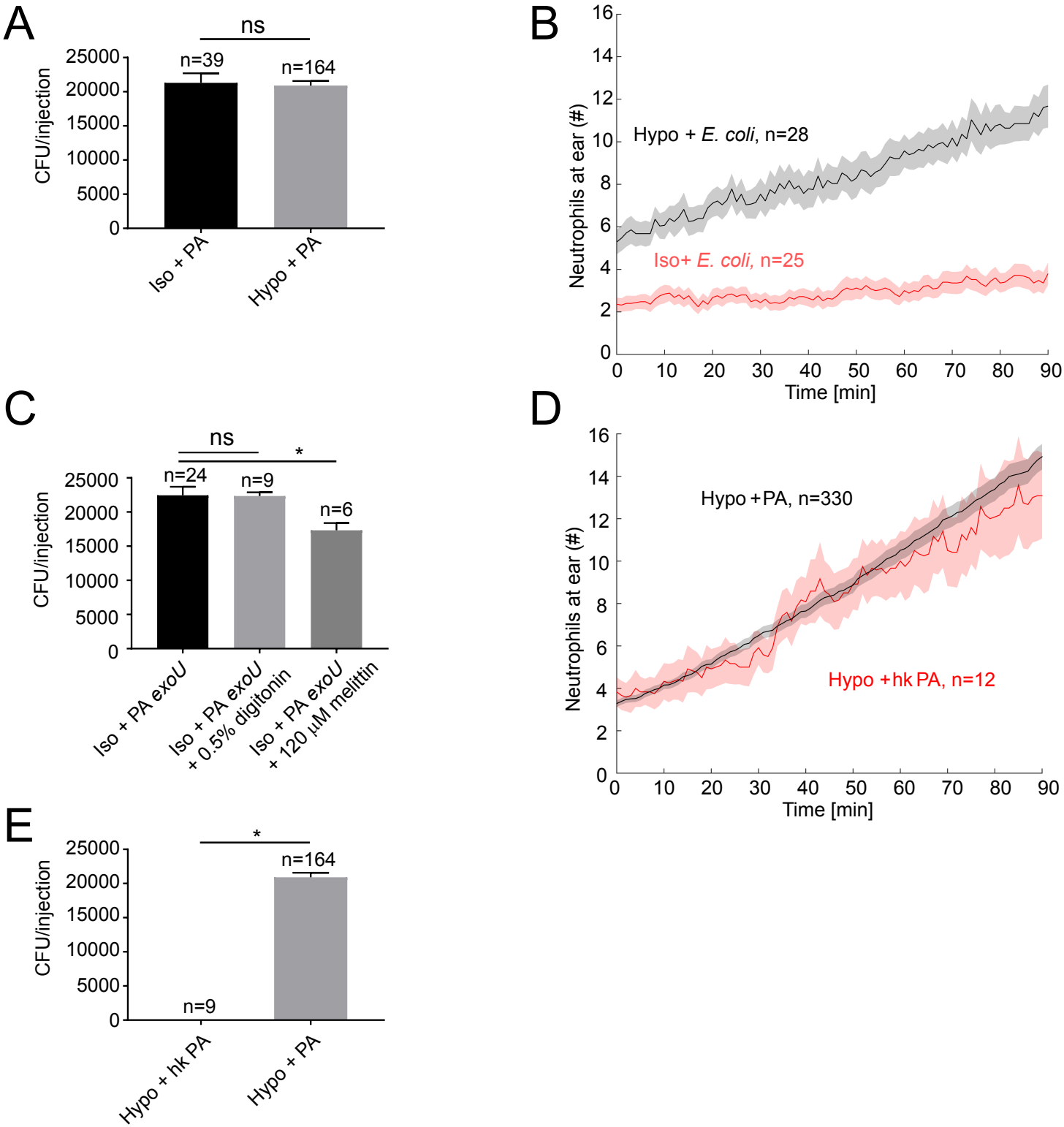

Figure S2. Related to Figure 2. (A) Average bacterial viability (colony-forming units, CFU) as a function of extracellular tonicity. Error bars, SEM of n different agarose plates. **(B)** Average neutrophil recruitment to *E. coli*-infected ears in zebrafish larvae in the presence (Hypo + *E. coli*, black) or absence (Iso + *E. coli*, red) of tissue damage signals. Shaded area, SEM of n injection experiments. **(C)** Average bacterial viability in response to digitonin or melittin treatment. Error bars, SEM of n different agarose plates. Asterisk, t-test $p<0.05$ **(D)** Average neutrophil recruitment to live (grey) or heat-killed (hk, red) PA. Shaded area, SEM of n injection experiments. Note, the reference data set (Hypo + PA) is the same as in the other figures. **(E)** Bacterial viability analysis as a function of heat-killing. Error bars, SEM of n different agarose plates. Note, Hypo + PA reference data set is the same as in S2A. For experimental numbers, please also see Table S1.

Figure S3

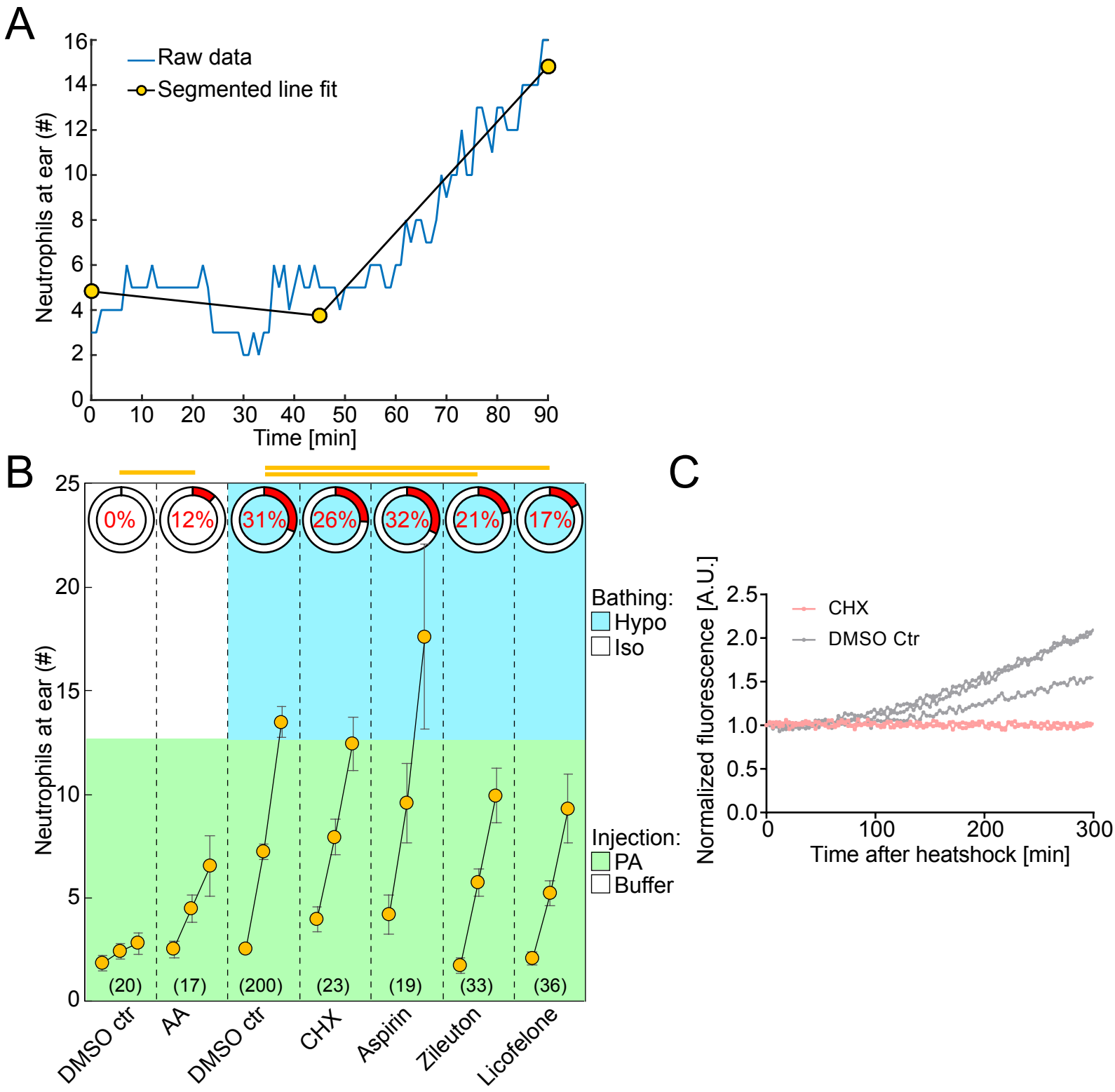

Figure S3. Related to Figure 5. (A) Segmentation of a representative leukocyte recruitment curve into a simplified 3-point recruitment curve with error bars as presented in Figure 5A and S3B. **(B)** Summary of pharmacologic pathway perturbations (indicated below graph). All compounds were applied by ear injection and bathing. The tonicity of the injection solution was always the same as the bath tonicity. Two measurements are given: the HR-index (red, pie charts), and average leukocyte recruitment curves (orange, 3-timepoint-plot format: 0', 45', 90', see A). The color shading denotes combinatorial experimental conditions as indicated on the right side. Error bars, SEM of indicated number (parentheses) of injection experiments. Orange lines, t-test $p<0.05$ (comparison of average leukocyte numbers at 90'). DMSO ctr, carrier control. CHX, cycloheximide. **(C)** 3 dpf TG(hsp70:cP-la$_2$mKate2) fish larvae were pretreated with CHX or DMSO control for 1 h at 28ºC followed by 1 h heat shock at 37°C. Larvae were imaged for 5 h to measure protein expression via mKate2 fluorescence. Individual curves denote the fluorescence signal within an individual animal. For experimental numbers, please also see Table S1.

Figure S4

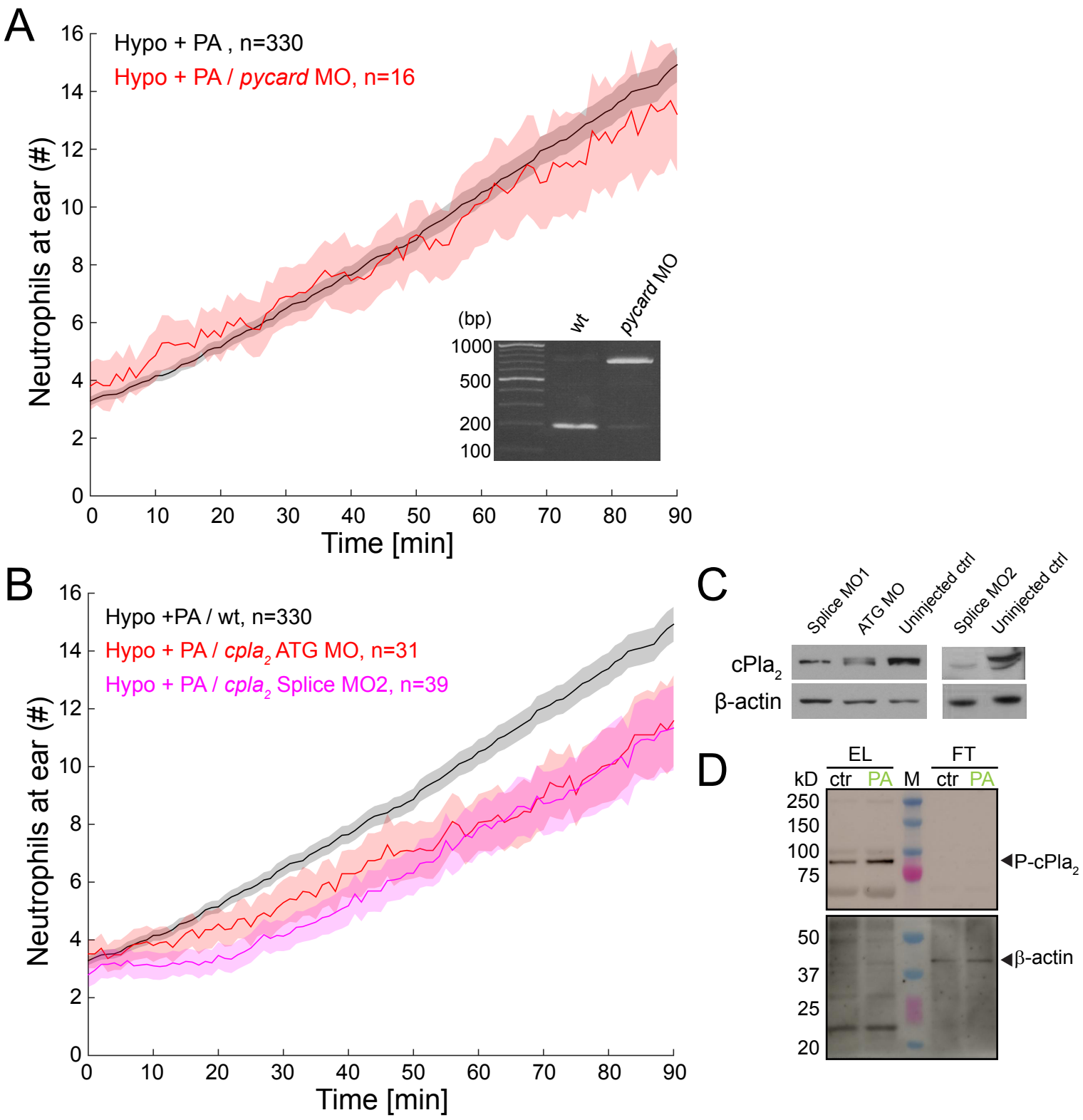

Figure S4. Related to Figure 5. (A) Average neutrophil recruitment to PA-infected ears upon silencing of *pycard* with a splice morpholino. Shaded area, SEM of n injection experiments. Note, reference data set (Hypo + PA) is the same as in all other figures. Inset, *pycard* splice morphant confirmation by RT-PCR. Morphants show a 548 bp insertion. **(B)** Average neutrophil recruitment to PA-injected ears in the presence of osmotic tissue damage signals and *cpla*$_2$ silencing (red & magenta) with two additional morpholinos. Note, the Hypo + PA data set (black) is the same as in other figures. **(C)** Morpholinos reduce cPla$_2$ protein levels as confirmed by western blot. **(D)** Anti-cPla$_2$ and anti-β-actin western blots of phospho-affinity column eluate (EL) and flowthrough (FT) at indicated experimental conditions. Note, unspecific β-actin signal (~23 kD) indicates equal gel-loading. Note, specific β-actin signal in flow through (~40 kD) confirms equal column-loading. M, colorimetric molecular size marker. Representative of two independent experiments. For experimental numbers, please also see Table S1.