# Supplementary tables

## Table S1

List of *D. melanogaster* genotypes. Stock number refers to the Bloomington or VDRC stock center numbers.

## Table S2

Results of GWAS of parathion resistance.

## Table S3

Results of nested GWAS of parathion resistance.

## Table S4

Results of GWAS of deltamethrin resistance.

## Table S5

Results of nested GWAS of deltamethrin resistance.

## Table S6

Details of the validation (see Figure 2C and 3D). Results from general linear hypothesis test (glht) with Tukey post Hoc pairwise comparisons, to ascertain differences between pairs of treatments (package *multcomp* in R) after a generalized linear model with a quasibinomial distribution of the residuals.

## Table S7

Details of the validation (see Figure 2C and 3D). Results from generalized linear model with a quasibinomial distribution of the residuals.

## Table S8

Raw phenotypic data for resistance to Parathion.

## Table S9

Raw phenotypic data for resistance to Deltamethrin.

# Supplementary figure legends

## Figure S1

Difference in survival to insecticide exposure between the DGRP lines carrying *Wolbachia* and those that do not carry the endosymbiont. Lines carrying *Wolbachia* did not survive better than those without *Wolbachia* (**A**: Survival to parathion over time; **B**: Survival to deltamethrin at 48 h). Non-significant effects are indicated by “ns”.

## Figure S2

Correlation between the resistance to insecticide (i.e. proportion surviving after 48 h of parathion or deltamethrin exposure) and other abiotic stresses: Paraquat (**A** and **B**), Starvation (**C** and **D**) and alcohol (alcohol sensitivity is measured by measuring elution time) (**E** and **F**). Measurements of resistance to other stresses were performed in other studies (see details in methods). Analysis of correlation was done with Spearman correlation test. A blue line represents the significant correlation between the two traits.

## Figure S3

Genetic correlation between10 lines amongst the most sensitive (red) and 10 lines the amongst most resistant (green) to **A**) parathion exposure and **B)** deltamethrin exposure. The grey gradient represents the strength of the genetic correlation with black being “genetically identical”.

## Figure S4

Manhattan plots with the package *Chromplot* in R showing precisely the peak of p-values along the genome for the complete GWAS (shown to the left of the chromosome) and the nested GWAS (shown to the right of the chromosome) for resistance to parathion. Names of genes are manually selected candidates. The full datasets can be found in tables S2 and S3.

## Figure S5

Mean survival upon parathion exposure of lines variants at the *Ace* loci. **A-** Variation in *Ace* (mutation G303A) in position 3R:13,243,686 affects the resistance to parathion. **B-** Variation in *Ace* (mutation I199V) in position 3R:13,243,999 affects the resistance to parathion.

## Figure S6

Correlation between the resistance to insecticide (i.e. proportion of survival 48 h upon parathion or deltamethrin exposure) and the constitutive expression of validated genes. Experimental measurements of gene expression were measured in other studies (see details in methods). Analysis of correlation was done with Spearman correlation test. A blue line represents represent the significant correlation between the two traits.

## Figure S7

Manhattan plots with the package *Chromplot* in R showing precisely the peak of p-values along the genome for the complete GWAS (shown to the left of the chromosome) and the nested GWAS (shown to the right of the chromosome) for resistance to deltamethrin. Names of genes are manually selected candidates. The full datasets can be found in tables S4 and S5.

## Figure S8

Mean survival upon exposure to deltamethrin of lines variants for the SNP in position 2R:14,876,857 belonging to the validated candidate gene *Cyp6a23* (**A**) and for the SNP belonging to the validated candidate gene *CG7627* (**B**). Colors represent five replicated experiments.