

Figure S1.

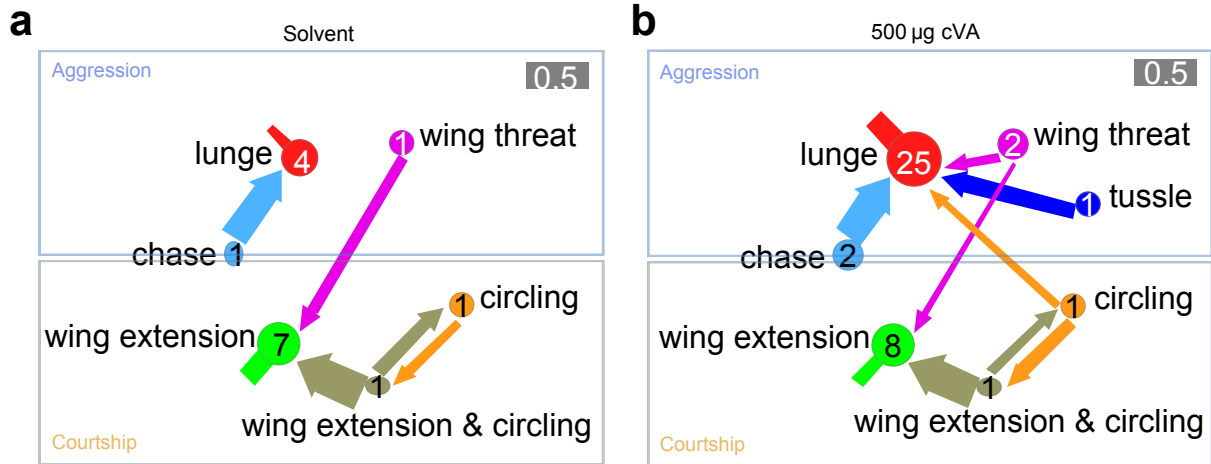


Figure S1. Ethograms of fly behaviors upon cVA application.

Ethograms of group-housed Canton-S male flies in the presence of solvent only (a) or 500 µg synthetic cVA (b) showing the transitions between fly behaviors within 10 seconds. The thickness of the arrows represents transition probabilities (grey scale bar: probability=0.5). Arrow stumps represent transitions within the same behavior. Diameters of the circles (log scaled) and the numbers in the circles represent frequencies of behaviors.

Figure S2.

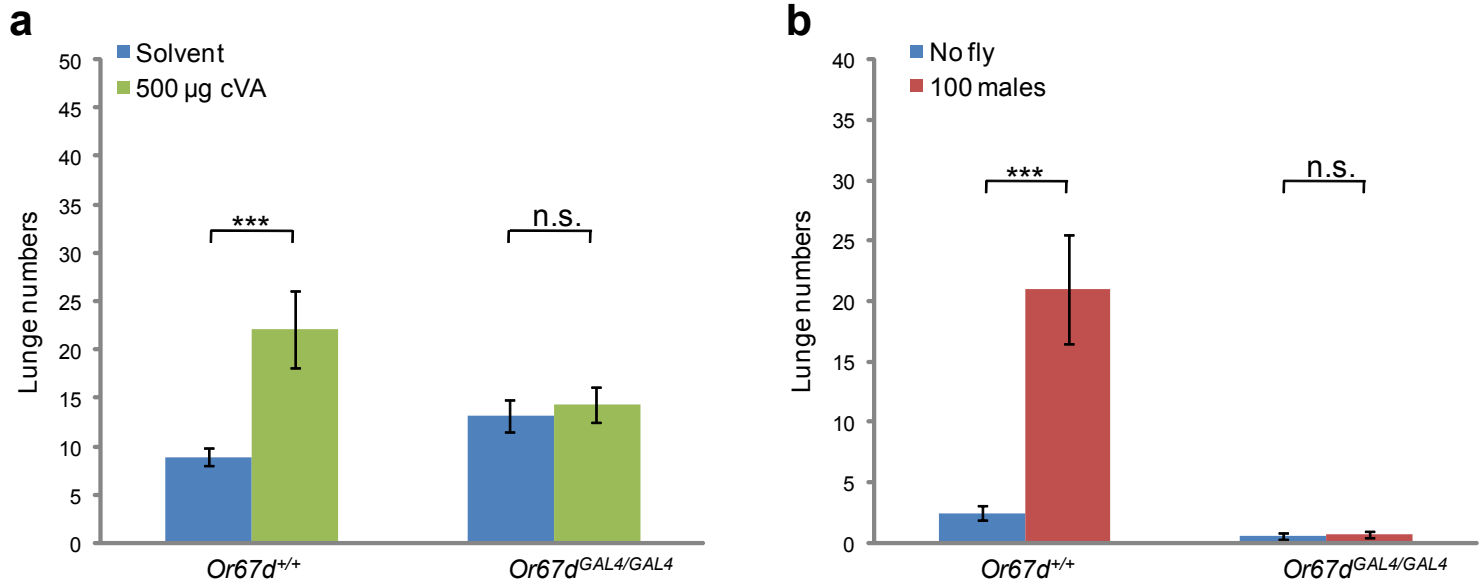


Figure S2. The *Or67d* gene is required for the aggression-promoting effect of both synthetic and endogenous cVA.

(a) Number of lunges (per 20 minutes) performed by pairs of mutant *Or67d^{GAL4/GAL4}* males and *Or67d^{+/+}* control males, in the presence of solvent only (blue) or 500 μ g cVA (green) (n=20-22). The experiments were performed in the setup shown in Fig. 1g.

(b) Number of lunges (per 20 minutes) performed by pairs of mutant *Or67d^{GAL4/GAL4}* males and *Or67d^{+/+}* control males, in the presence of no donors (blue), or 100 caged male "donor" flies (red) (n=10). The experiments were performed in the setup shown in Fig. 4a. *** P<0.001. Error bars are s.e.m. Note that due to the low aggression level of the genetic background of the mutants, single-housed flies were used for both experiments.

Figure S3.

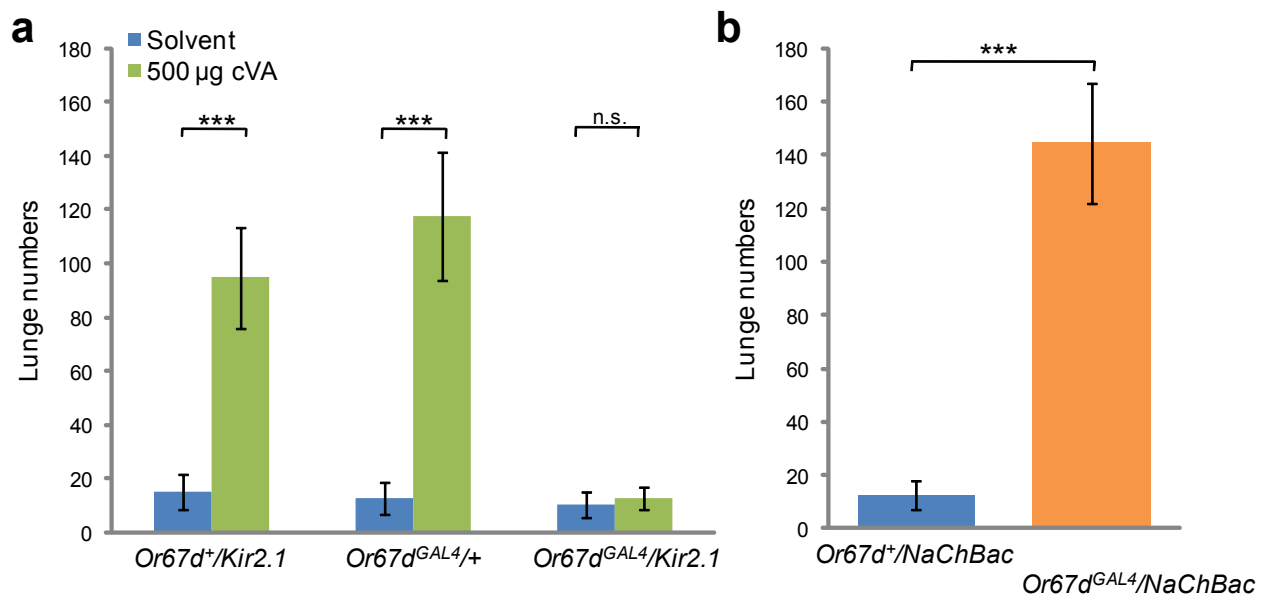


Figure S3. Activation of Or67d-expressing OSNs promotes aggression in dispersal assay.

(a) Number of lunges (per 30 minutes) performed by six males of the indicated genotype in the presence of solvent only (blue) or 500 µg cVA (green) (n=8). (b) Number of lunges (per 30 minutes) performed by six males of the indicated genotype (n=10). The experiments were performed in the behavior chamber shown in Fig. 4d. *** P<0.001. Error bars are s.e.m.