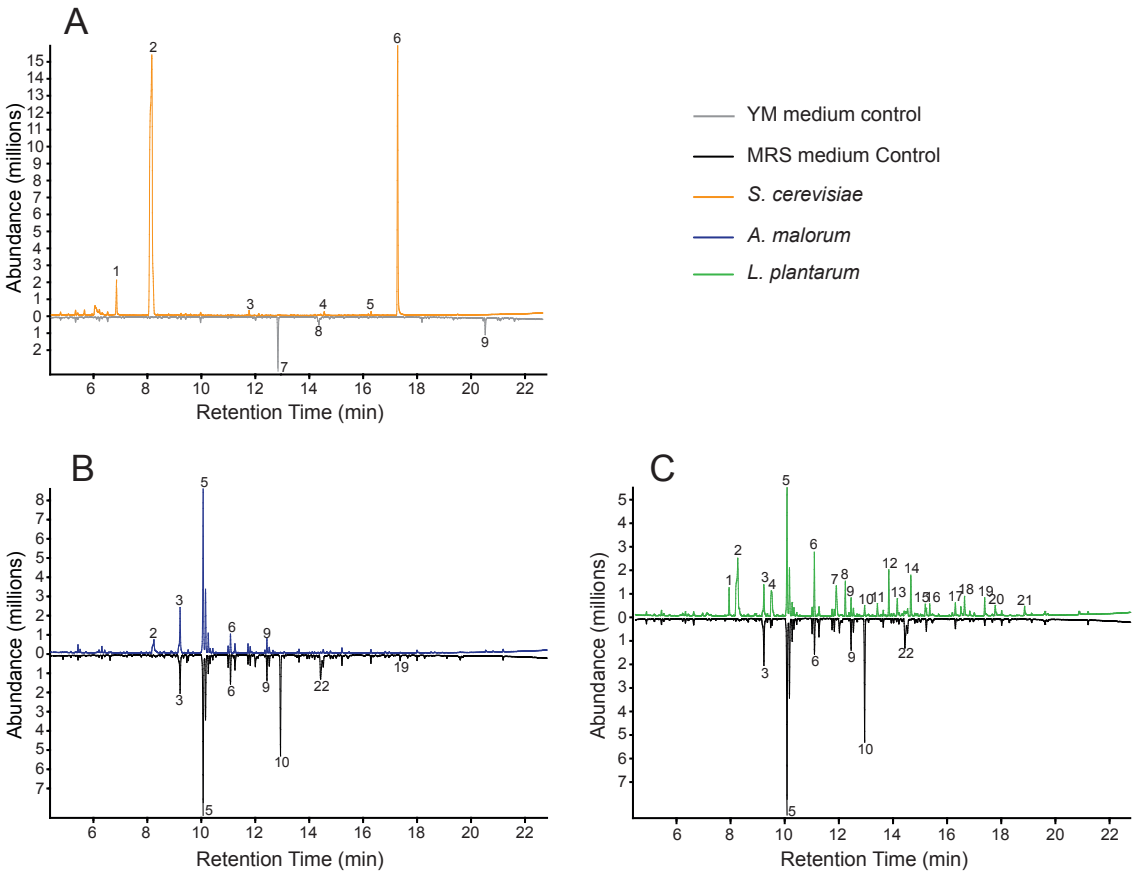

Fig. S1. GC-MS profile of headspace odors from different microbe culture and its medium control. Numbers from GC-MS refer to peaks in **A**: (1) isopentyl acetate; (2) 3-methyl-1-butanol; (3) isovaleric anhydride; (4) 2-methylhexanoic acid; (5) 2-phenethyl acetate; (6) 2-phenylethanol; (7) benzaldehyde; (8) phenylacetaldehyde; (9) (E)-1-(6,10-Dimethylundeca- 5,9-dien-2-yl)-4-methylbenzene. Numbers from GC-MS refer to peaks in **B and C**: (1) 2-heptanone; (2) 3-methyl-1-butanol; (3) methylpyrazine; (4) acetoin; (5) 2,5-dimethylpyrazine; (6) 2-nonanone; (7) acetic acid; (8) 2,6-dimethyl-4-heptanol; (9) 2-ethenyl-6-methyl pyrazine; (10) benzaldehyde; (11) isobutyric acid; (12) 2-undecanone; (13) butanoic acid; (14) isovaleric acid; (15) 2-Undecanol; (16) 1-methoxynonane; (17) 2-acetylphenol; (18) hexanoic acid; (19) phenylethyl alcohol; (20) (Z)-4-decen-1-ol, methyl ether; (21) octanoic acid; (22) benzeneacetaldehyde.

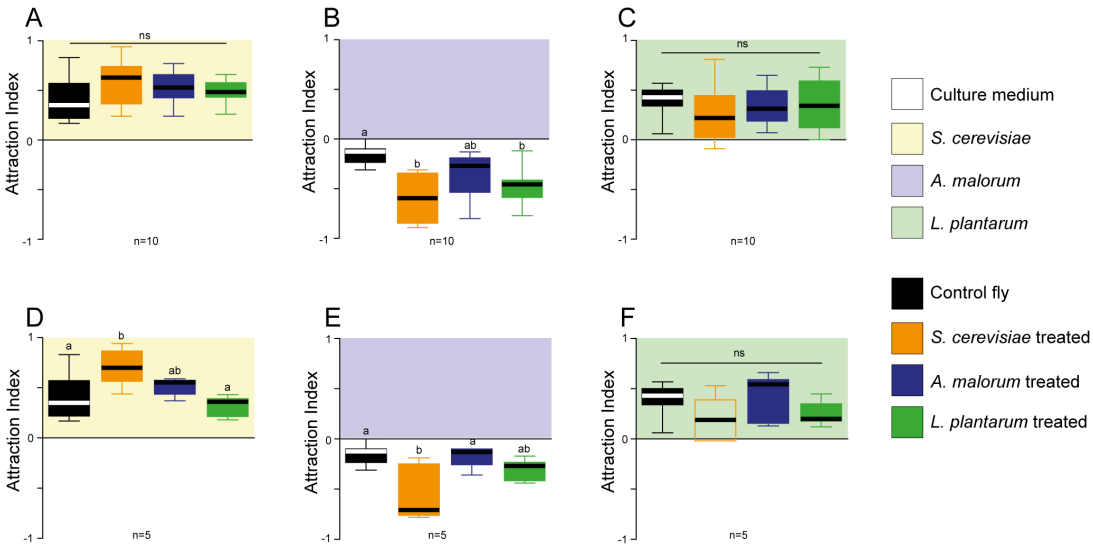

Fig. S2. Attraction assays of *Drosophila* manipulated for 1 generation (A-C) and 5 generations (D-F) toward different microbes. Error bars represent SE. Significance from zero are denoted by filled boxes ($p<0.05$, Two tailed paired t test), significant differences between each group are denoted by letters above ($p<0.05$ with lower letter, One way ANOVA, Tukey's multiple comparison test). Filled boxplots are different from 0 (Wilcoxon rank sum test, $p<0.05$).

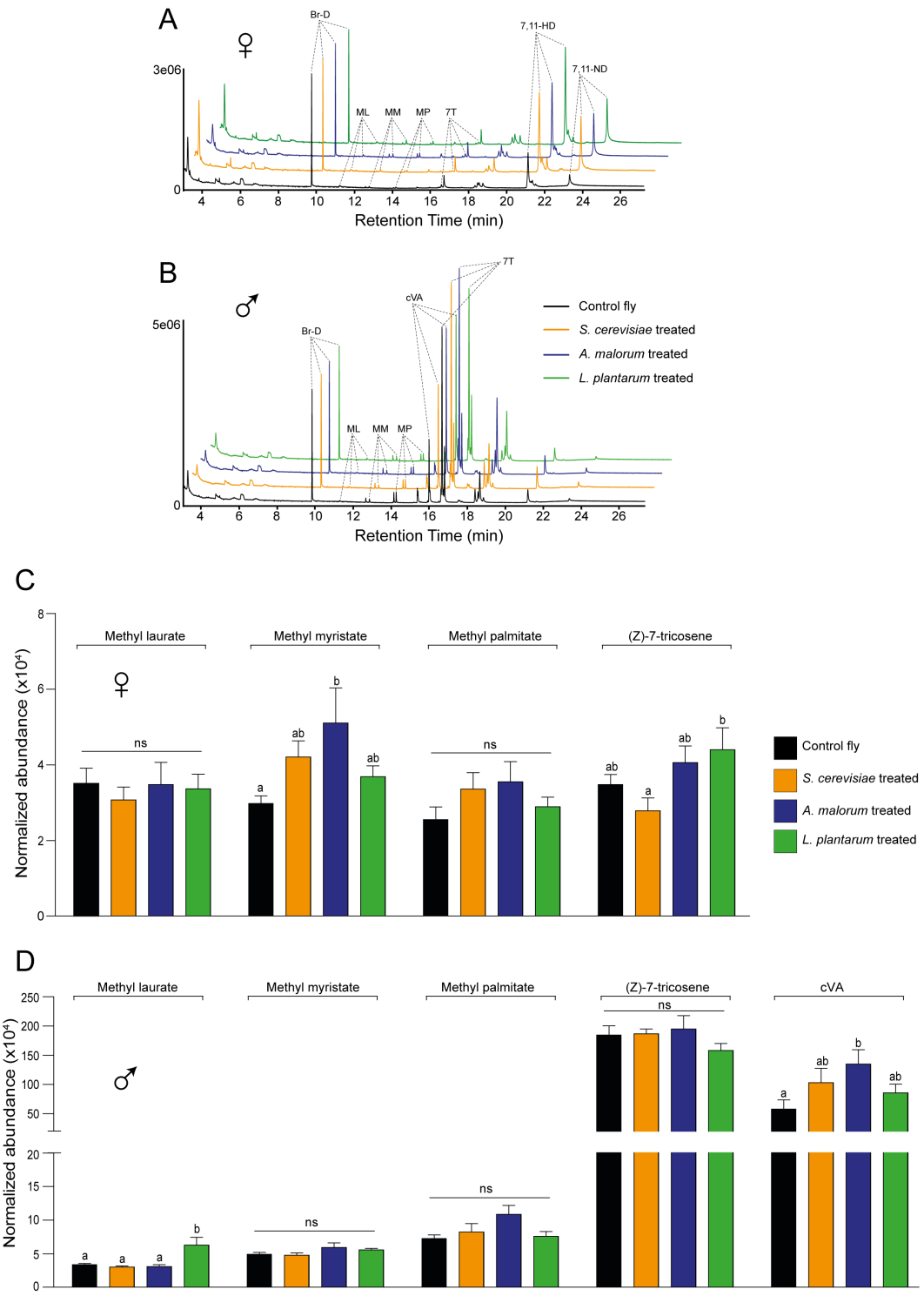

Fig. S3. GC-MS profiles of body wash from female (A) and male (B), and quantitative analysis of compounds from female (C) and male (D) *Drosophila* control and manipulated for 2 days with different microbes. Br-D, bromodecane (internal standard); ML, methyl laurate; MM, methyl myristate; MP, methyl palmitate; 7T, (Z)-7-tricosene; cVA, cis-vaccenyl acetate; 7,11-HD, 7(Z),11(Z)-heptacosadiene; 7,11-ND, 7(Z),11(Z)-nonacosadiene. (N=8-10 replicates, $p<0.05$ with lower letter, One way ANOVA, Tukey's multiple comparison test).

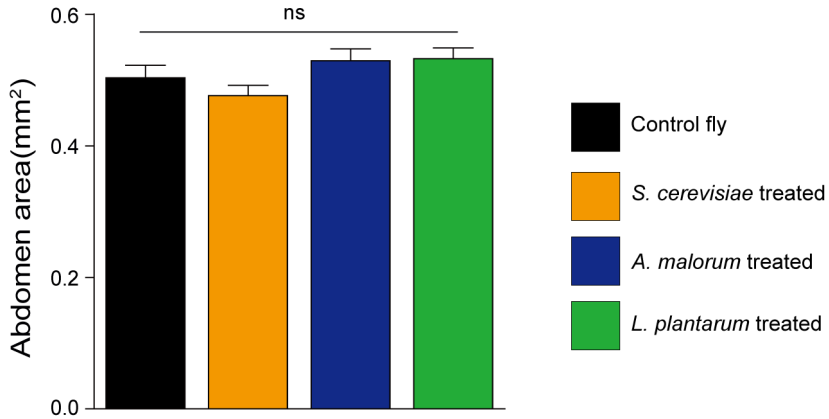

Fig. S4. Male abdomen size of control and 2 days manipulated *Drosophila*. Error bars represent SE. Significant differences are denoted by letters (One way ANOVA, Tukey's multiple comparison test).