

# Cannabinoids modulate food preference and consumption in *Drosophila melanogaster*

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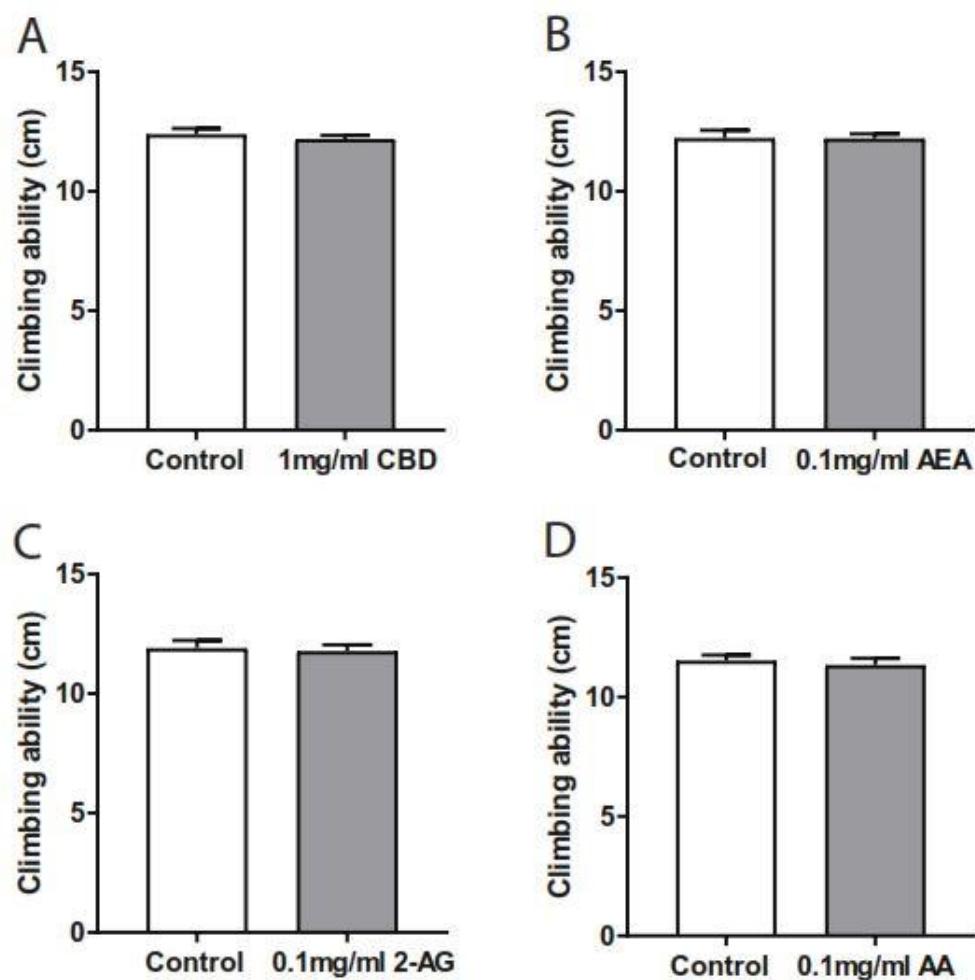
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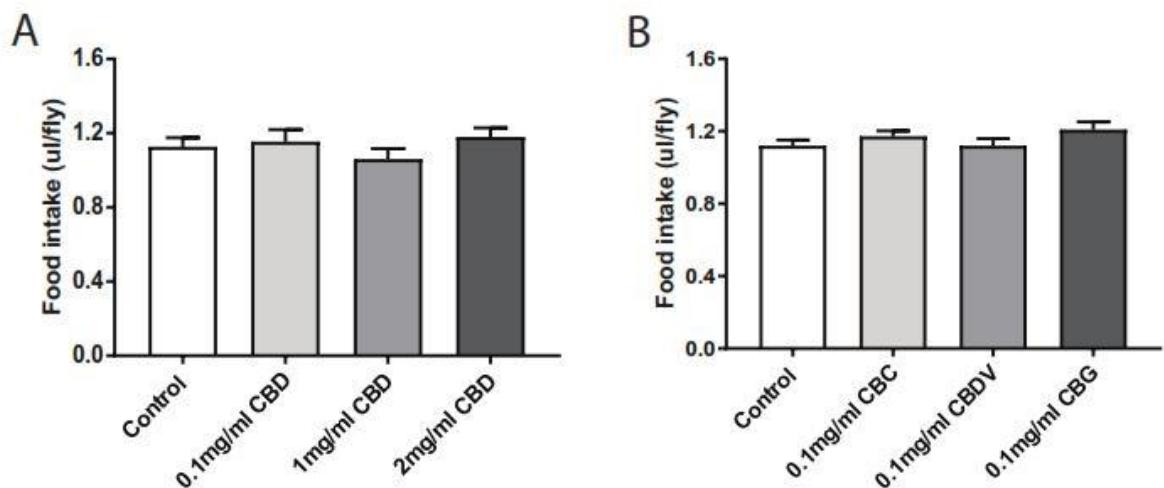
Running title: Cannabinoids affects feeding behavior in flies

Supplementary

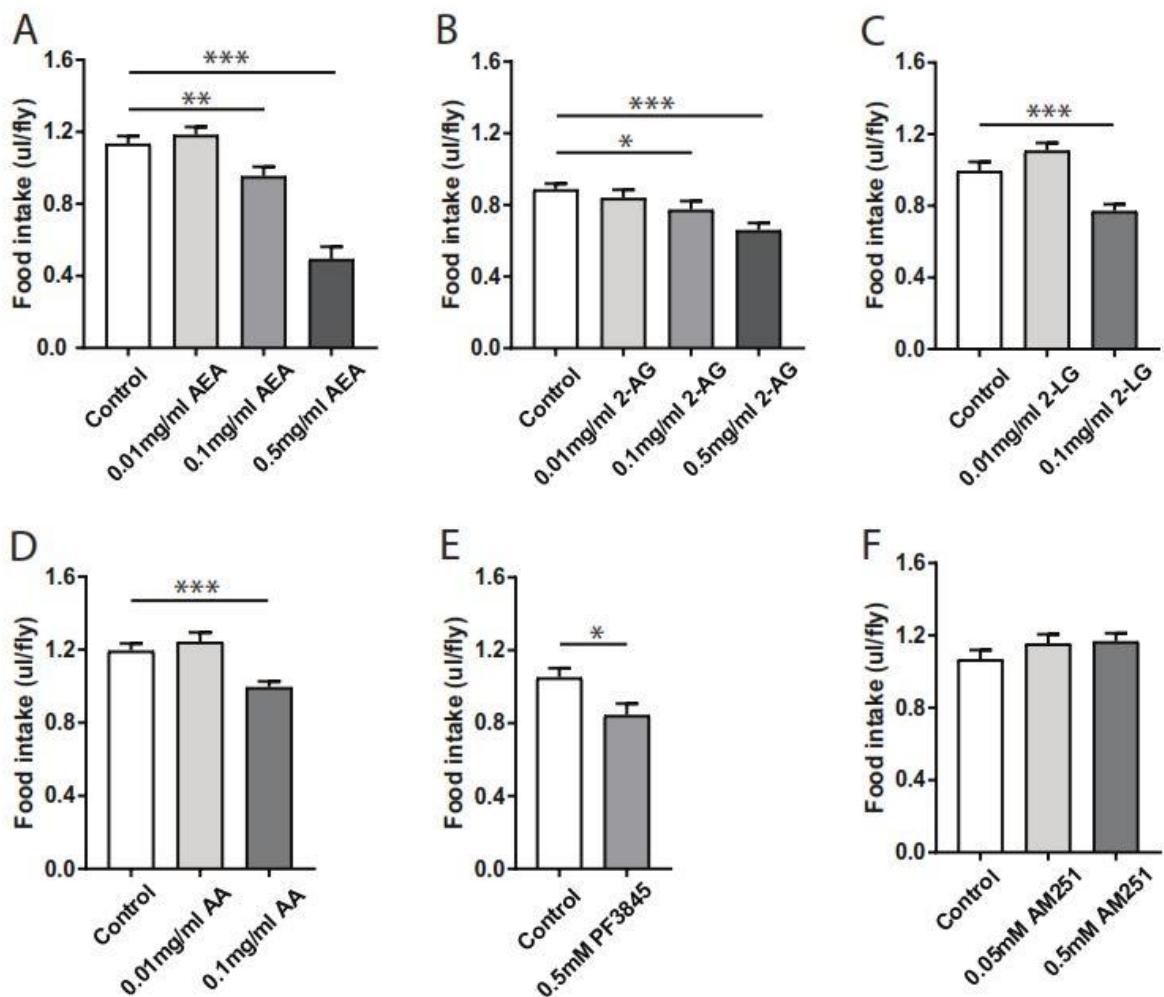


**Figure S1. No or negligible effects of cannabinoids on climbing ability of the treated flies.**

Following two days of treatment with cannabinoids, the climbing ability of the flies was assessed to determine the locomotive behavior. Pre-treatment with 1 mg/ml CBD (A), 0.1 mg/ml AEA (B), 0.1 mg/ml 2-AG (C), 0.1 mg/ml AA (D) (n=8-12 vials/group) did not alter the climbing performance. Data are represented as mean  $\pm$  S.E.M.



**Figure S2. Initial food intake was not altered during the phytocannabinoids training.** Flies consumed similar amounts of food containing various concentrations of CBD (0.01, 0.1 and 1 mg/ml; n=12-19 vials/group) (A), or CBDV, CBC or CBG (0.1 mg/ml; n=32-33 vials/group) (B) during two days of the training (day -2 and day -1) as compared to the respective control solutions. Data are represented as mean  $\pm$  S.E.M.



**Figure S3. Endocannabinoids-containing food intake decreased during the initial training.**

The amount of food with AEA (0.1 and 0.5 mg/ml) (A), 2-AG (0.1 and 0.5 mg/ml) (B), 2-LG (0.1 mg/ml) (C), AA (0.1 mg/ml) (D) and PF3845 (0.5 mM) (E) consumed by the flies during two days of the training (day -2 and day -1) was significantly lower when compared to the respective control solutions (n=10-27). The consumption of food with AM251 (F) by the flies did not differ from the control groups (n=18 vials/group). Data are represented as mean  $\pm$  SEM. One-way ANOVA followed by Dunnett's post-test was applied to determine statistical significance. \*p<0.05, \*\*p<0.01, and \*\*\*p<0.001.