

**Table S1. Statistics and sample size for data shown in Figs 1–5**

**Experiment 1:**

Figure	n (workers)				Nested ANOVA for “treatment”	Nested ANOVA for “rank” nested in “treatment”
	Untreated control	1.2 mg	3 mg	6 mg		
Figure 1a (ovaries)	57	9	36	15	$F_{3,105}=67.7$ , $p<0.001$ ; post-hoc: $p<0.02$ for Un. and 1.2 mg vs. 3 and 6 mg	$F_{8,105}=10.4$ , $p<0.001$ ; post hoc $p<0.02$ for Un. and 1.2 mg vs. 3 and 6 mg
Figure 1b (JH)	18	-	18	-	$F_{1,30}=6.6$ , $p=0.015$ for Un. vs. 3mg	$F_{4,30}=1.4$ , $p=0.25$ for Un. vs. 3mg
Figure 1b (MF)	18	-	18	-	$F_{1,30}=0.46$ , $p=0.5$ for Un. vs. 3mg	$F_{4,30}=0.96$ , $p=0.43$ for Un. vs. 3mg

**Experiment 2:**

Figure	n (workers)				Nested ANOVA for “treatment”	Nested ANOVA for “rank” nested in “treatment”
	Untreated control	Precocene	DMF	JH		
Figure 2 (ovaries)	36	36	42	33	$F_{1,66}=7.72$ , $p=0.007$ for Un. Vs. Prec. $F_{1,69}=7.5$ , $p=0.007$ for DMF vs. JH	$F_{4,66}=15.78$ , $p<0.001$ ; post hoc: NS for same ranks in different treatments $F_{4,69}=8.47$ , $p<0.001$ ; post hoc: NS for same ranks in different treatments
Figure 3 (aggression)	36	42	42	33	$F_{1,72}=14.23$ , $p<0.001$ for Un. vs. Prec. $F_{1,69}=4.65$ , $p=0.03$ for DMF vs. JH	$F_{4,72}=23.2$ , $p<0.001$ ; post hoc: $p<0.001$ for Un./1 <sup>st</sup> vs. all other groups $F_{4,69}=6.01$ , $p<0.001$ ; post hoc: $p<0.003$ for JH/1 <sup>st</sup> vs. all groups but JH/2 <sup>nd</sup> and DMF/1 <sup>st</sup>
Total secretion (no figure)	33	33	30	24	$F_{1,60}=1.91$ , $p=0.17$ for Un. vs. Prec. $F_{1,48}=0.59$ , $p=0.44$ for DMF vs. JH	$F_{4,69}=1.3$ , $p=0.28$ for Un. vs. Prec. $F_{4,48}=0.5$ , $p=0.73$ for DMF vs. JH
Figure 4 (esters)	33	33	30	24	$F_{1,60}=4.21$ , $p=0.04$ for Un. vs. Prec. $F_{1,48}=0.37$ , $p=0.54$ for DMF vs. JH	$F_{4,60}=2.93$ , $p=0.02$ ; post hoc: $p=0.02$ for $\gamma$ /Prec. vs. all groups but $\alpha$ /Un. and $\alpha$ /Prec. $F_{4,48}=2.51$ , $p=0.05$ for DMF vs. JH; post hoc: $p>0.05$ for all groups
Figure 5 (JH)	13	11	14	12	$F_{1,18}=4.84$ , $p=0.04$ for Un. vs. Prec. $F_{1,20}=9.73$ , $p=0.005$ for DMF vs. JH	$F_{4,18}=1.03$ , $p=0.41$ for Un. vs. Prec. $F_{4,20}=3.09$ , $p=0.03$ ; post hoc: $p<0.05$ for $\alpha$ worker vs. all other groups
Figure 5 (MF)	13	11	14	12	$F_{1,18}=3.53$ , $p=0.076$ for Un. vs. Prec. $F_{1,20}=0.86$ , $p=0.36$ for DMF vs. JH	$F_{4,18}=1.04$ , $p=0.41$ for Un. vs. Prec. $F_{4,20}=0.09$ , $p=0.98$ for DMF vs. JH