

Supplementary Material

Table S1 Primer sequences used in the research

	Sequence (5' → 3')		purpose
	Forward	Reverse	
<i>CYP4BQ1</i>	CGACGATGGCACTAAGAGGA	GAAACTAATGGCTGAAGCTG	qPCR
	taatacgaactcactatagggGCAAGCAAGTAGACA AGGAT	taatacgaactcactatagggCAGTAGCA AGTCAAGAAAGG	RNAi
<i>CYP4BQ3</i>	AGTGGGGGCGAAGAGTAAAA	CGCAAACTAAGGGCTGAAG	qPCR
<i>CYP4BG4</i>	CTCTGGTCTACTCCCTGTCT	AGCATTTCATAATTTTCCT	qPCR
<i>CYP4BR4</i>	CATCCGCTATTCTTCCGCTT	CCCTGTAGGTTTCGCTTCTAA	qPCR
<i>CncC</i>	CACTCAACAATGACGACGGT	CCAAGGAGAAGCCCAGATCC	qPCR
	taatacgaactcactatagggATTGGAGACGATTTTCG ATAT	taatacgaactcactatagggGTTCACTGC TGTTTGTTAGG	RNAi
<i>Keap1</i>	AATACAGATACATGGACGGA	GATGAAGATGAACAAGGAGA	qPCR
<i>Maf</i>	TTGGTCAGCATCTCTGTTCG	GCCATTCTTGCGTCTTTTCG	qPCR
<i>GFP</i>	taatacgaactcactatagggATGGTGTTCATGCTT TTCA	taatacgaactcactatagggCTCTCTTTTC GTTGGGGTCT	RNAi

Note: T7 promoter sequences in the dsRNA synthesis primers were indicated in lowercase letters.

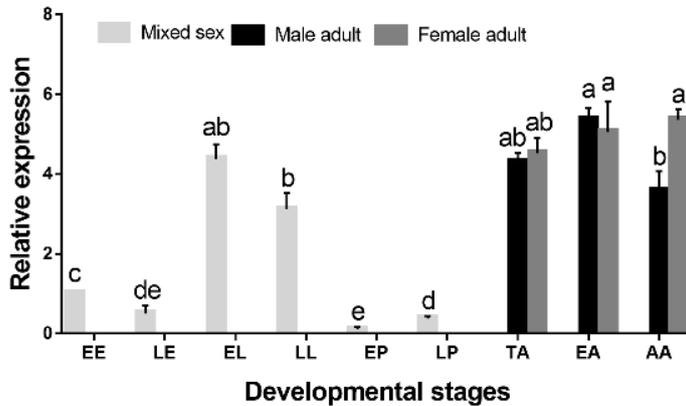


Figure S1. Relative mRNA expression levels of *CYP4BQ1* in different developmental stages of *D. armandi*. The relative expression levels were normalized with β -actin and

CYP4G55. Different lowercase letters indicate significant differences at $P < 0.05$. (ANOVA, Turkey test). All values are mean \pm SE, $n = 3$. EE, early egg; LE, late egg; EL, early larvae; LL, late larvae; EP, early pupae; LP, late pupae; TA, teneral adult; EA, emerged adult; AA, attacking adult.

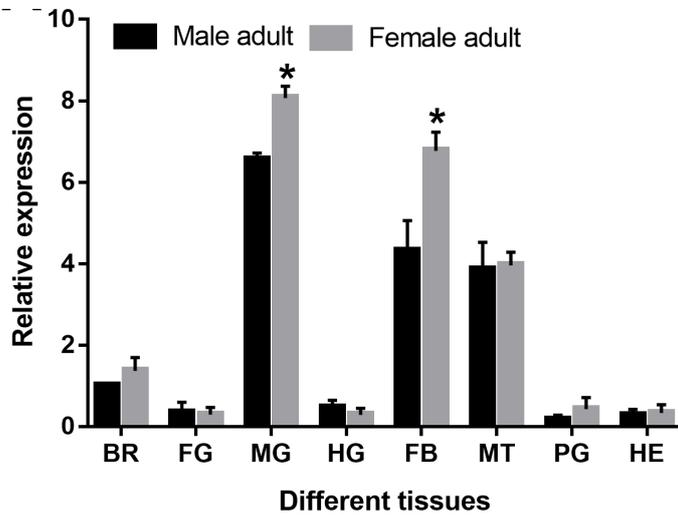


Figure S2. Relative expression levels of emerged adults of *CYP4BQ1* in different tissues of *D. armandi*. The relative expression levels were normalized with β -actin and *CYP4G55*. The asterisk indicates a significant difference between female and male expression levels ($*P < 0.05$, independent Student's Test). All values are mean \pm SE, $n = 3$. BR, brain; FG, foregut; MG, midgut; HG, hindgut; FB, fat body; MT, Malpighian tubules; PG, pheromone gland; HE, hemolymph.

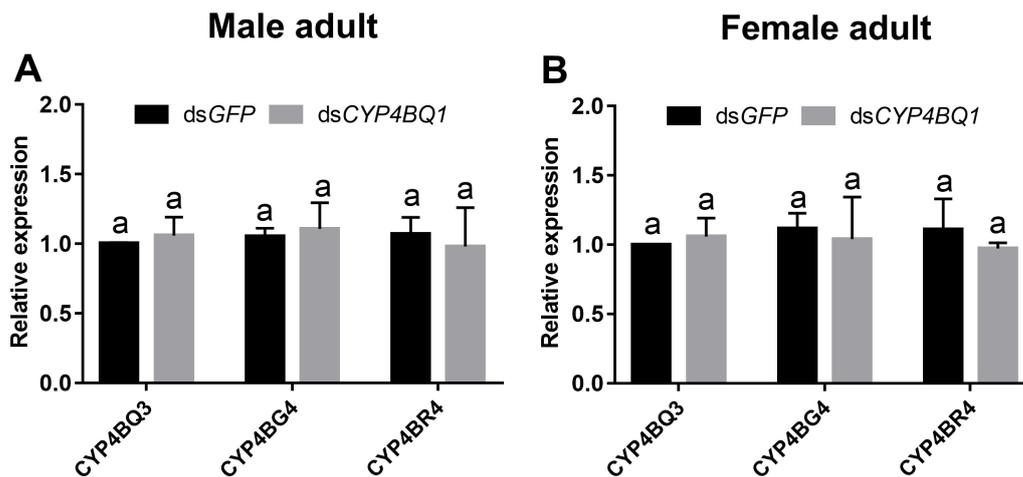


Figure S3. Relative expression levels of three CYP4B subfamily genes (*CYP4BQ3*, *CYP4BG4* and *CYP4BR4*) in *D. armandi* emerged male (A) and female (B) adults after injected dsRNA at 72h. The relative expression levels were normalized with β -actin and *CYP4G55*. Different letters indicate significant differences at $P < 0.05$. All values are mean \pm SE, $n = 3$.