

Supplementary Information for

Widespread gene expression divergence in butterfly sensory tissues plays a fundamental role during reproductive isolation and speciation

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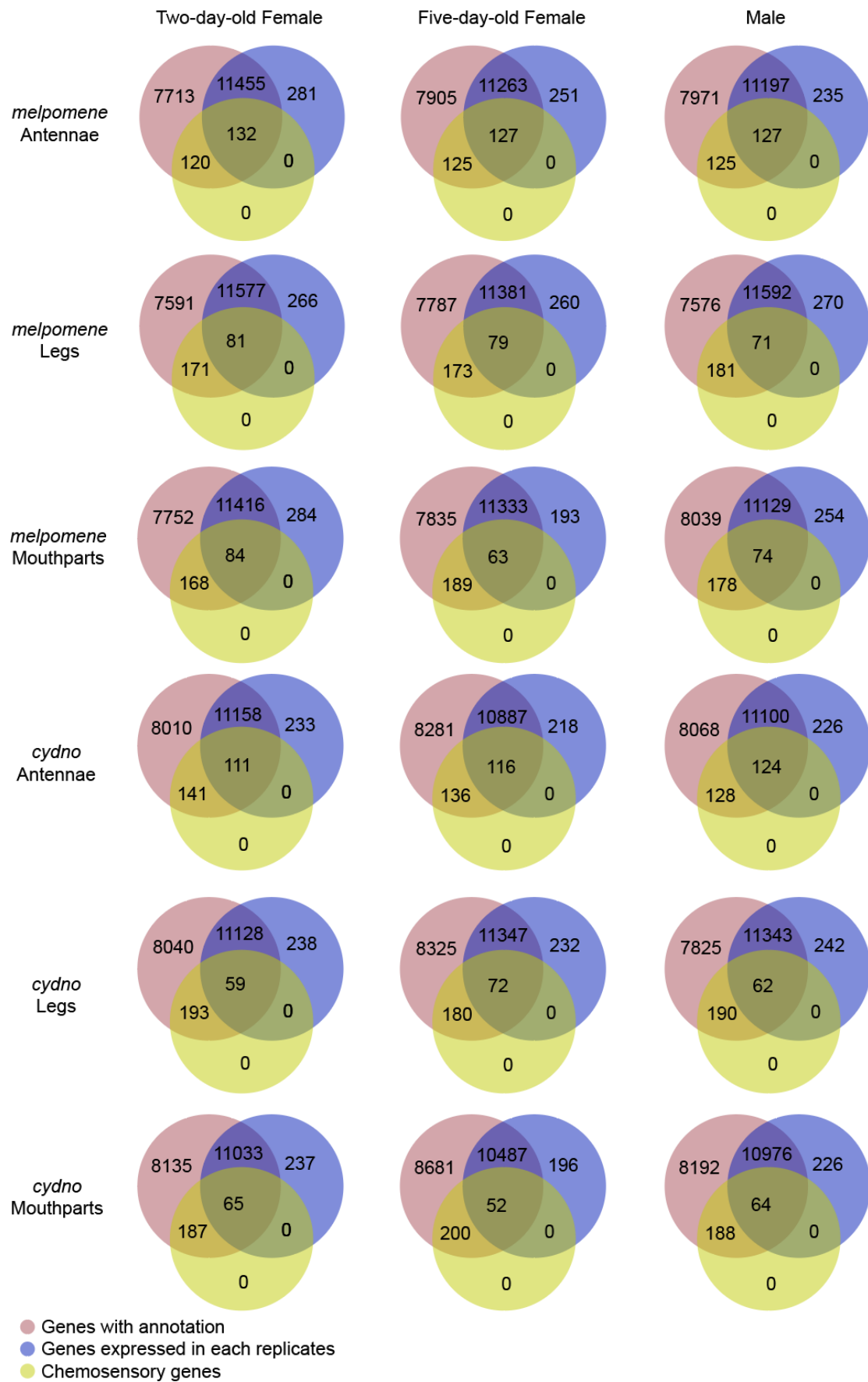
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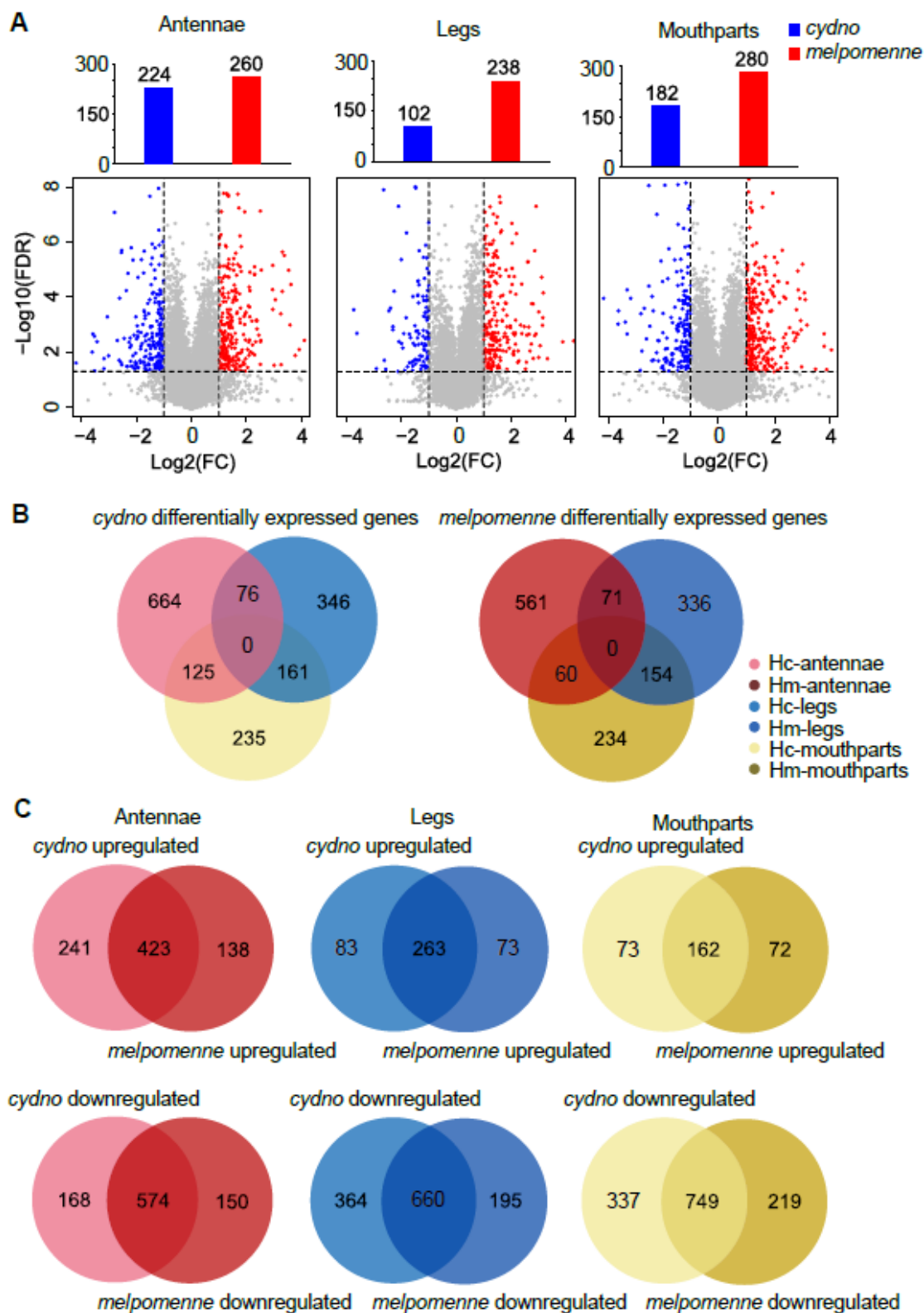
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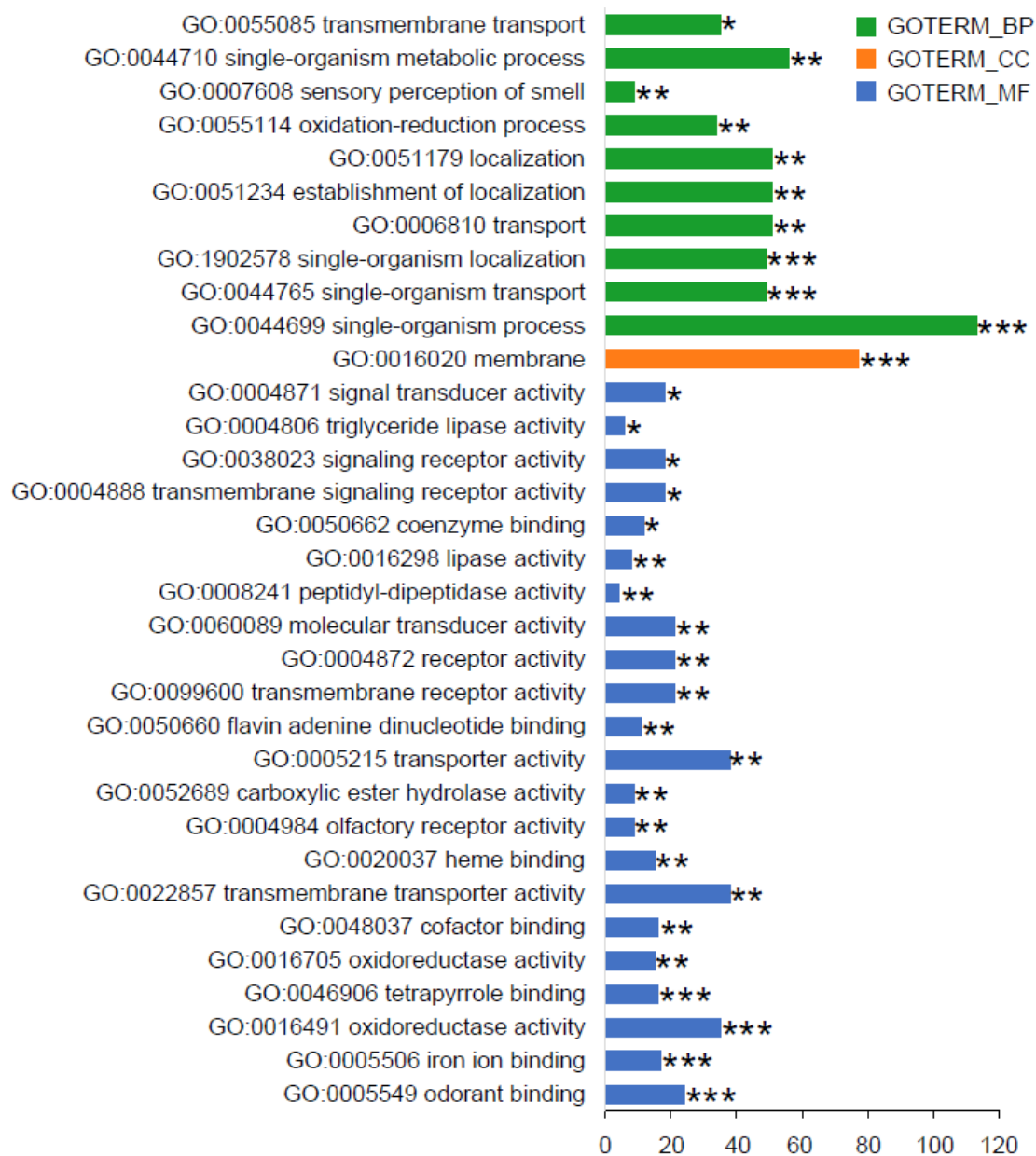


Supplementary Figure 1. Venn diagrams of overlapping genes in transcriptome analysis results. For two-day-old female, five-day-old female and male chemosensory organs in each species, a Venn diagram shows the overlapping total annotated genes, expressed genes, and chemosensory genes.

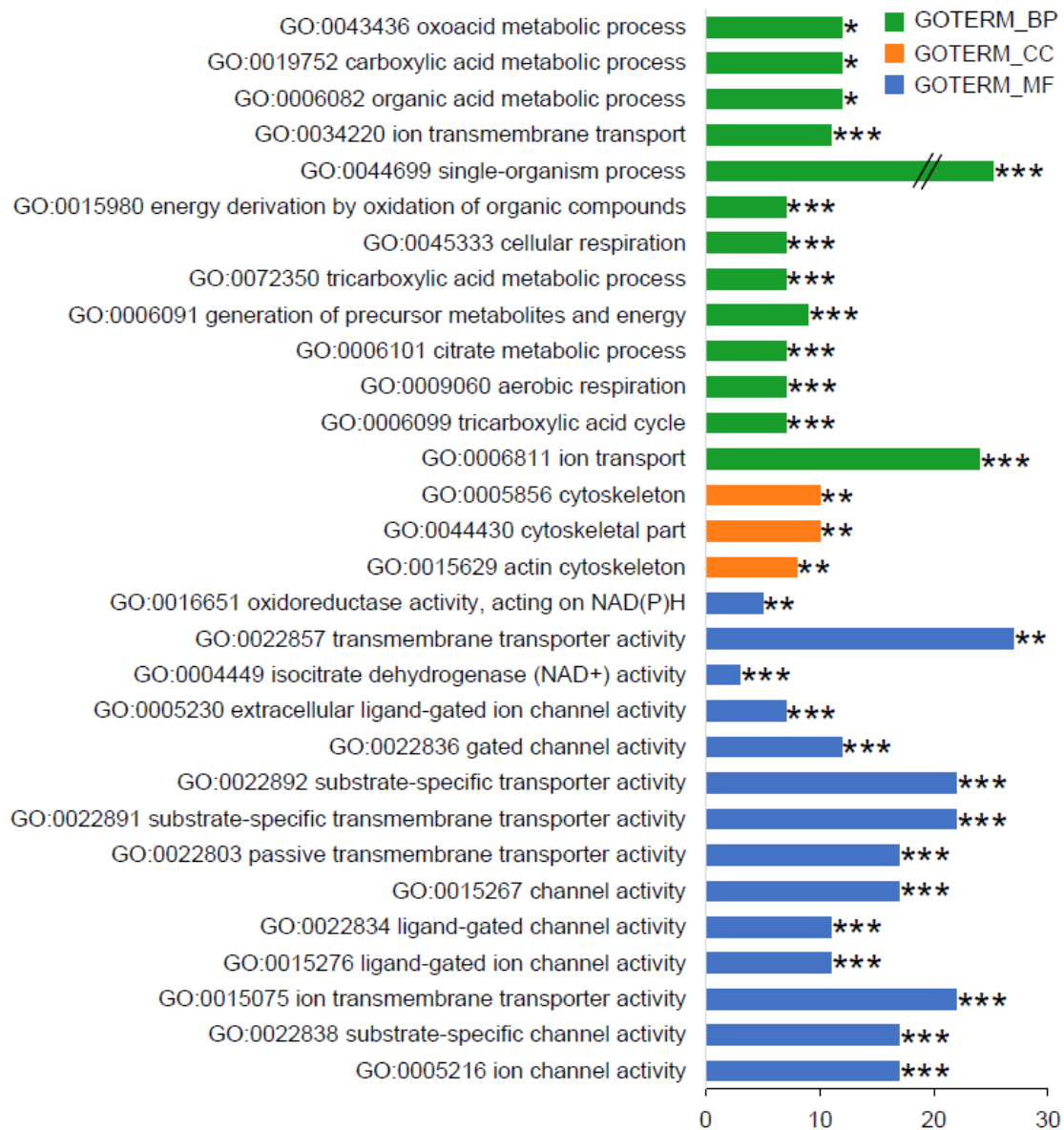


Supplementary Figure 2. Gene expression patterns in chemosensory tissues between *H. cydno* and *H. melpomene*. (A) Volcano plots and histograms showing differentially expressed genes (DEGs) between *H. cydno* and *H. melpomene* in antennae, legs, and mouthparts, respectively. (B) Venn diagrams showing the overlapping DEGs in antennae, legs, and

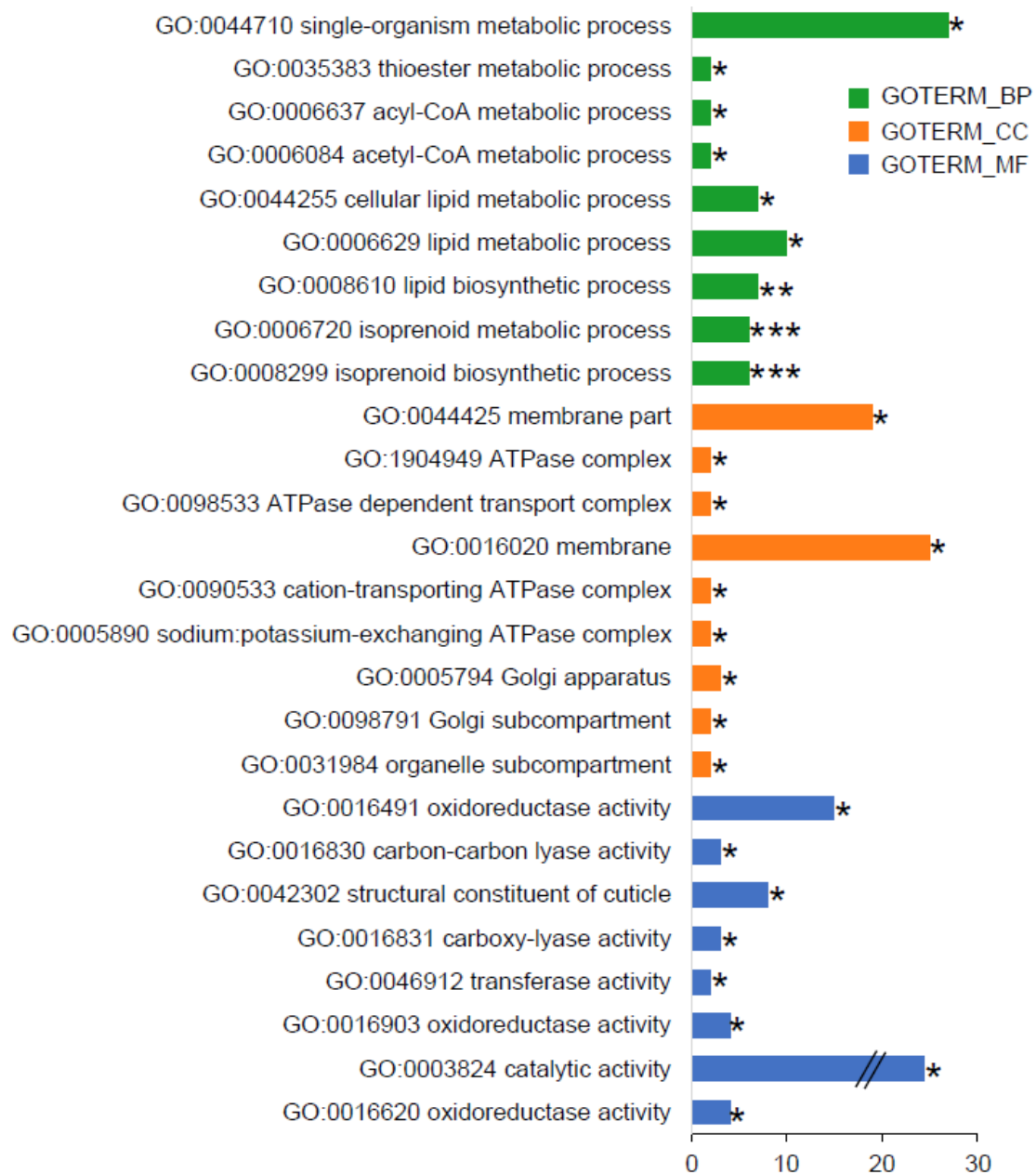
mouthparts. Hc and Hm refer to *H. cydno* and *H. melpomene*. (C) Venn diagrams showing the overlapping upregulated or downregulated genes between *H. cydno* and *H. melpomene* in antennae, legs, and mouthparts.



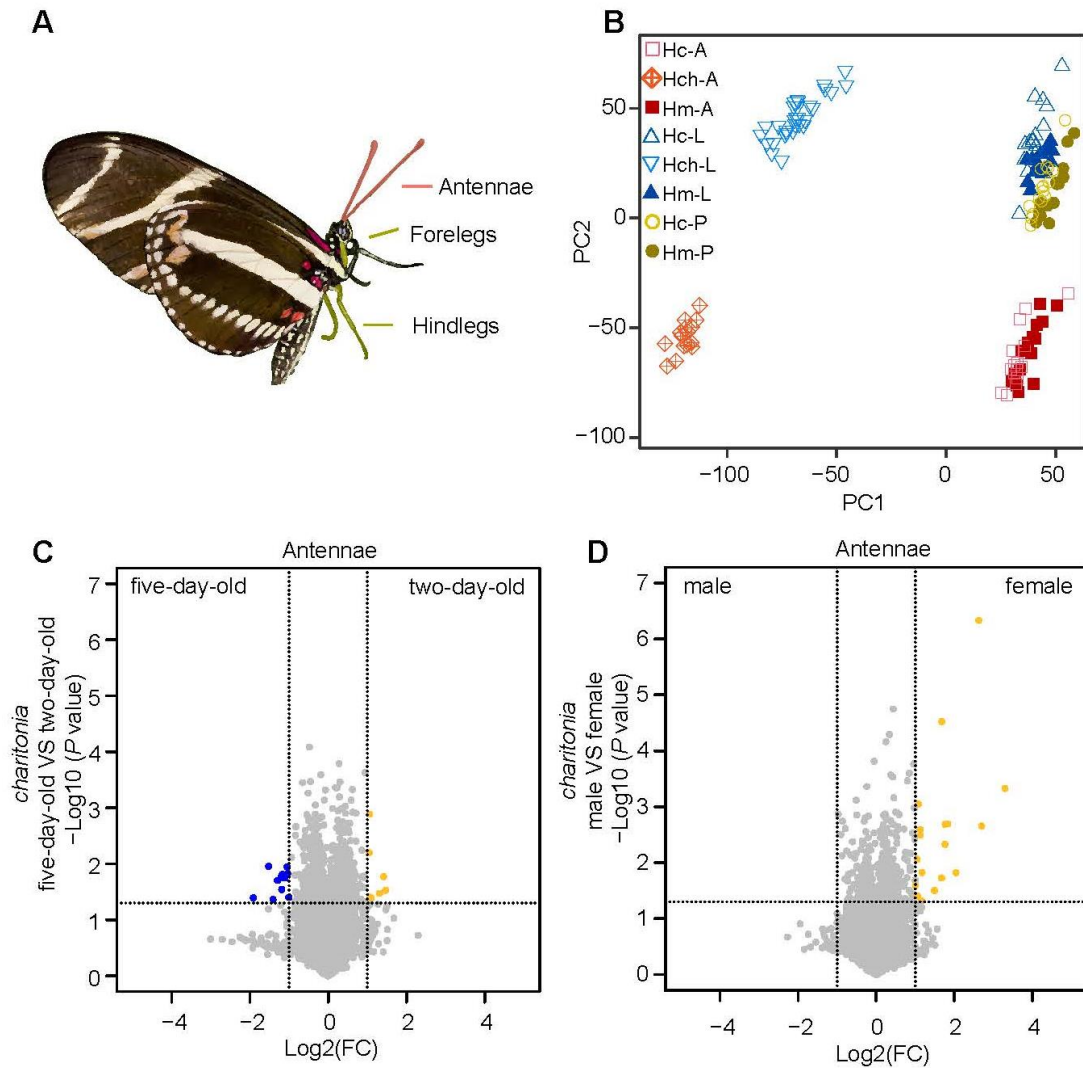
Supplementary Figure 3. Significantly enriched GO terms for upregulated antenna genes in both *H. cydno* and *H. melpomene*. GO enrichment analyses were performed for upregulated genes in antenna tissues relative to other tissues. BP, CC, and MF refer to the biological process, cellular component, and molecular function categories, respectively. The bar plots indicate the hit counts of GO terms. * indicates $P < 0.05$, ** indicates $P < 0.01$, and *** indicates $P < 0.001$.



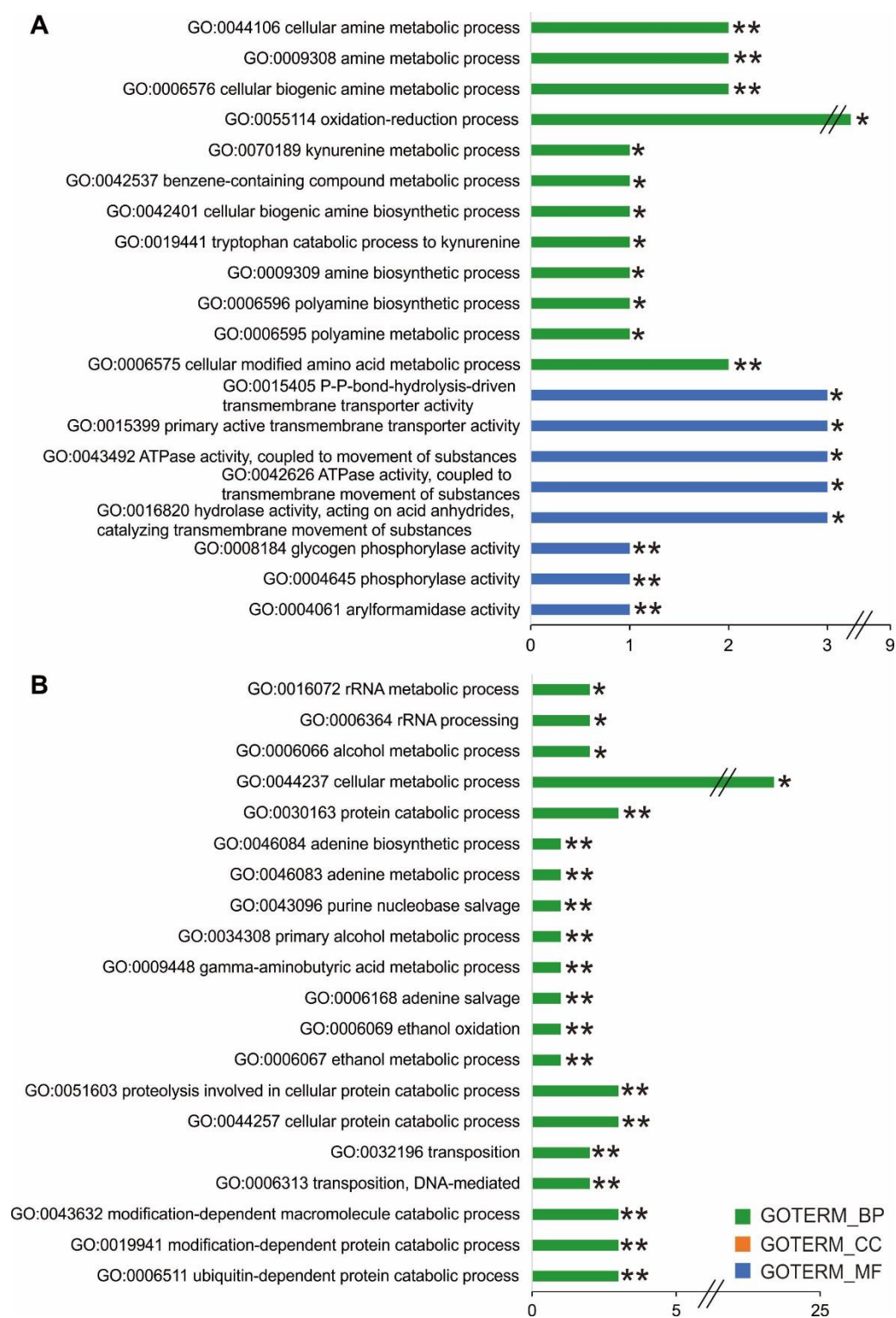
Supplementary Figure 4. Significantly enriched GO terms for upregulated leg genes in both *H. cydno* and *H. melpomene*. GO enrichment analyses were performed for upregulated genes in leg tissues relative to other tissues. BP, CC, and MF refer to the biological process, cellular component, and molecular function categories, respectively. The bar plots indicate the hit counts of GO terms. * indicates $P < 0.05$, ** indicates $P < 0.01$, and *** indicates $P < 0.001$.

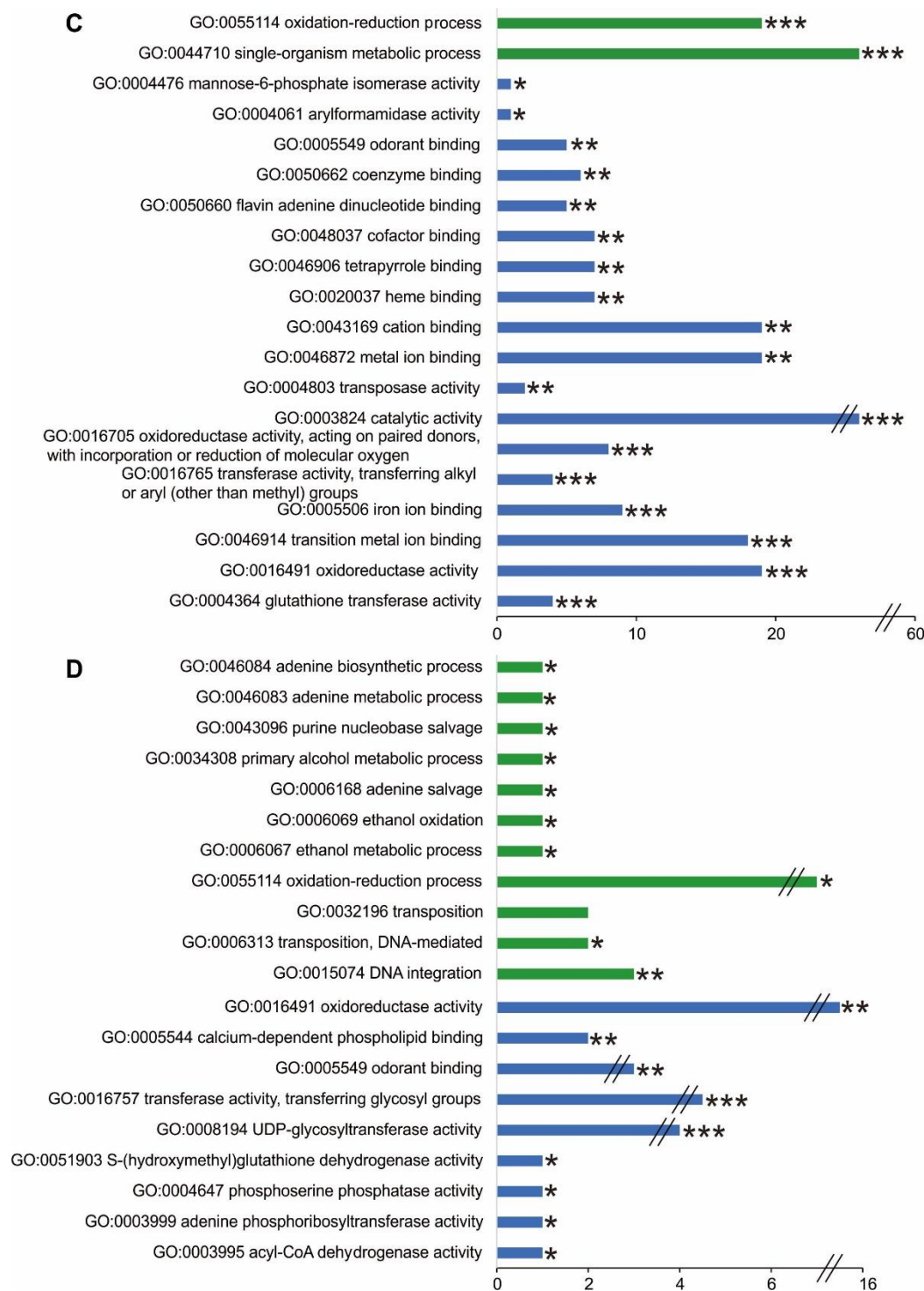


Supplementary Figure 5. Significantly enriched GO terms for upregulated mouthpart genes in both *H. cydno* and *H. melpomene*. GO enrichment analyses were performed for upregulated genes in mouthpart tissues relative to other tissues. BP, CC, and MF refer to the biological process, cellular component, and molecular function categories, respectively. The bar plots indicate the hit counts of GO terms. * indicates $P < 0.05$, ** indicates $P < 0.01$, and *** indicates $P < 0.001$.



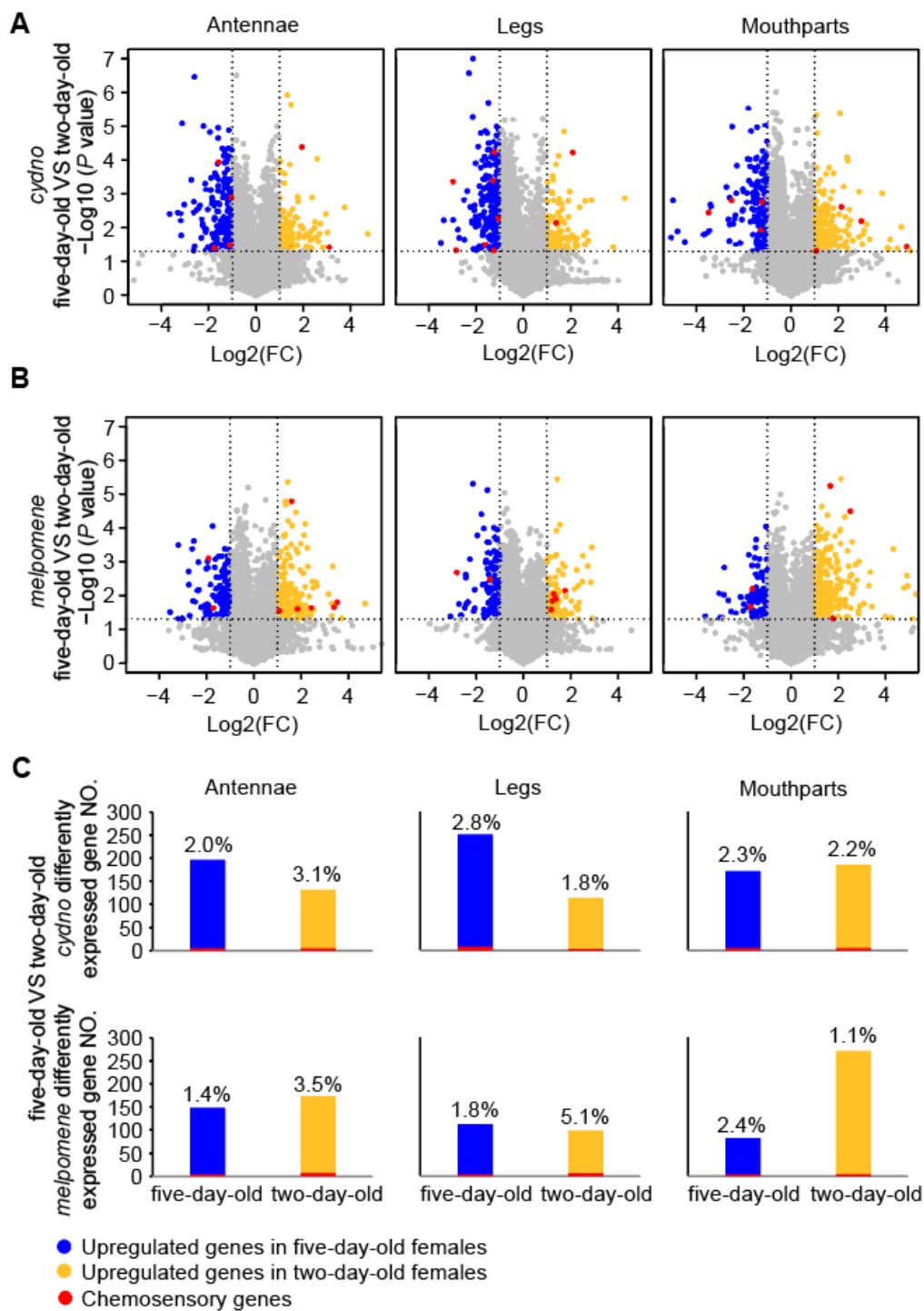
Supplementary Figure 6. Gene expression patterns in chemosensory tissues of *H. charithonia*. (A) Diagram of the body structure of *H. charithonia* with the antennae, forelegs and hindlegs labeled and colored in red and yellow, respectively. (B) Principal component analysis (PCA) of *H. charithonia*, *H. melpomene* and *H. cydno* chemosensory tissues based on their overall gene expression profiles. Solid circles represent the 95% confidence interval regions. Hch, Hm, and Hc refer to *H. charithonia*, *H. melpomene* and *H. cydno*, respectively, whereas A, L and P refer to antennae, legs and mouthparts, respectively. Volcano plots showing differentially expressed genes between two-day-old and five-day-old females in antennae (C) and between five-day-old males and females in antennae (D).



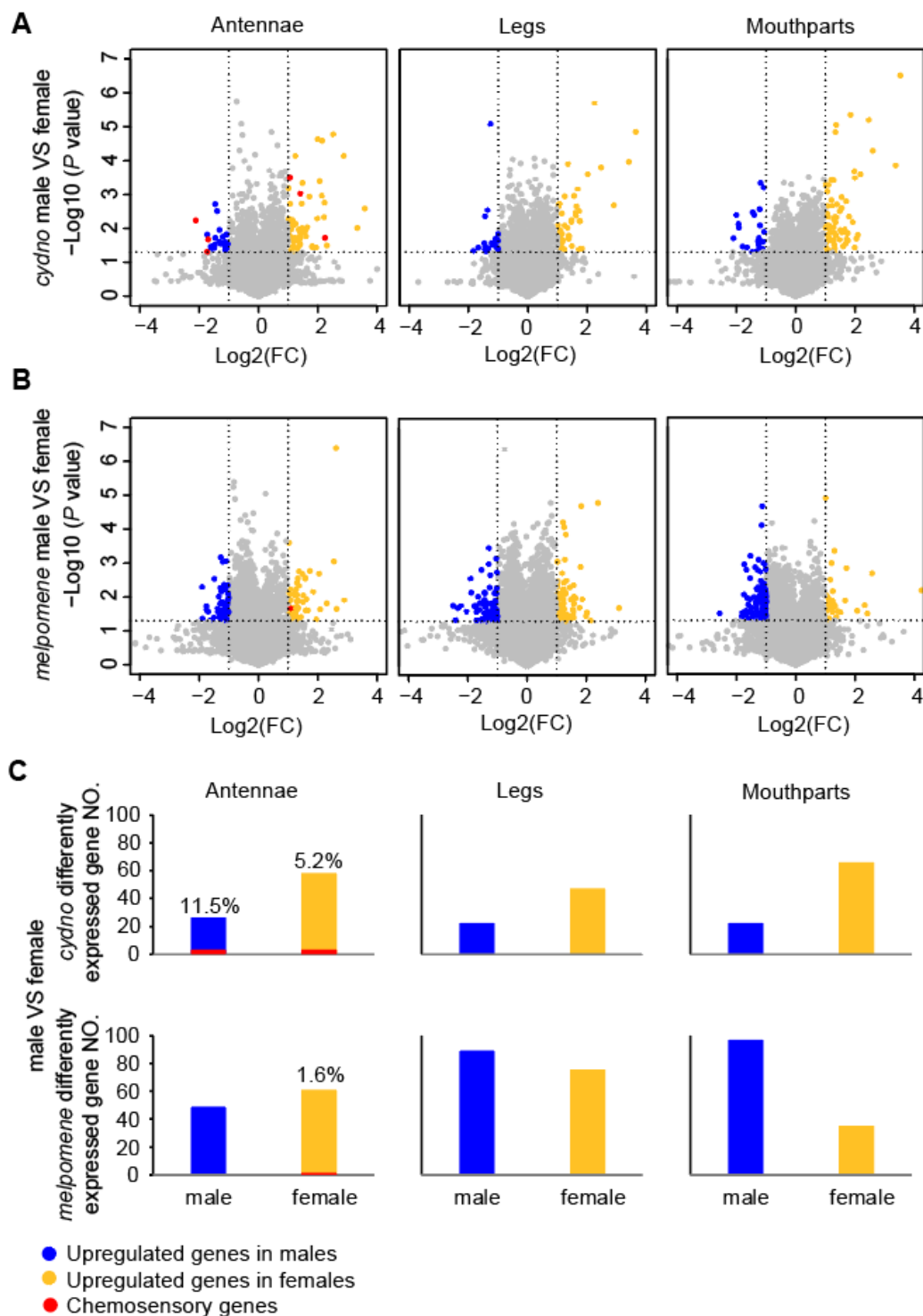


Supplementary Figure 7. Top 20 significantly enriched GO terms for upregulated genes in pooled and 5-day-old female antennae in the comparison of *H. cydno* and *H. melpomene*. (A) Top 20 significantly enriched GO terms for upregulated genes in pooled female antennae in *H. cydno*. (B) Top 20 significantly enriched GO terms for upregulated genes in pooled female antennae in *H. melpomene*. (C) Top 20 significantly enriched GO terms for upregulated genes in 5-day-old female antennae in *H. cydno*. (D) Top 20 significantly enriched GO terms for

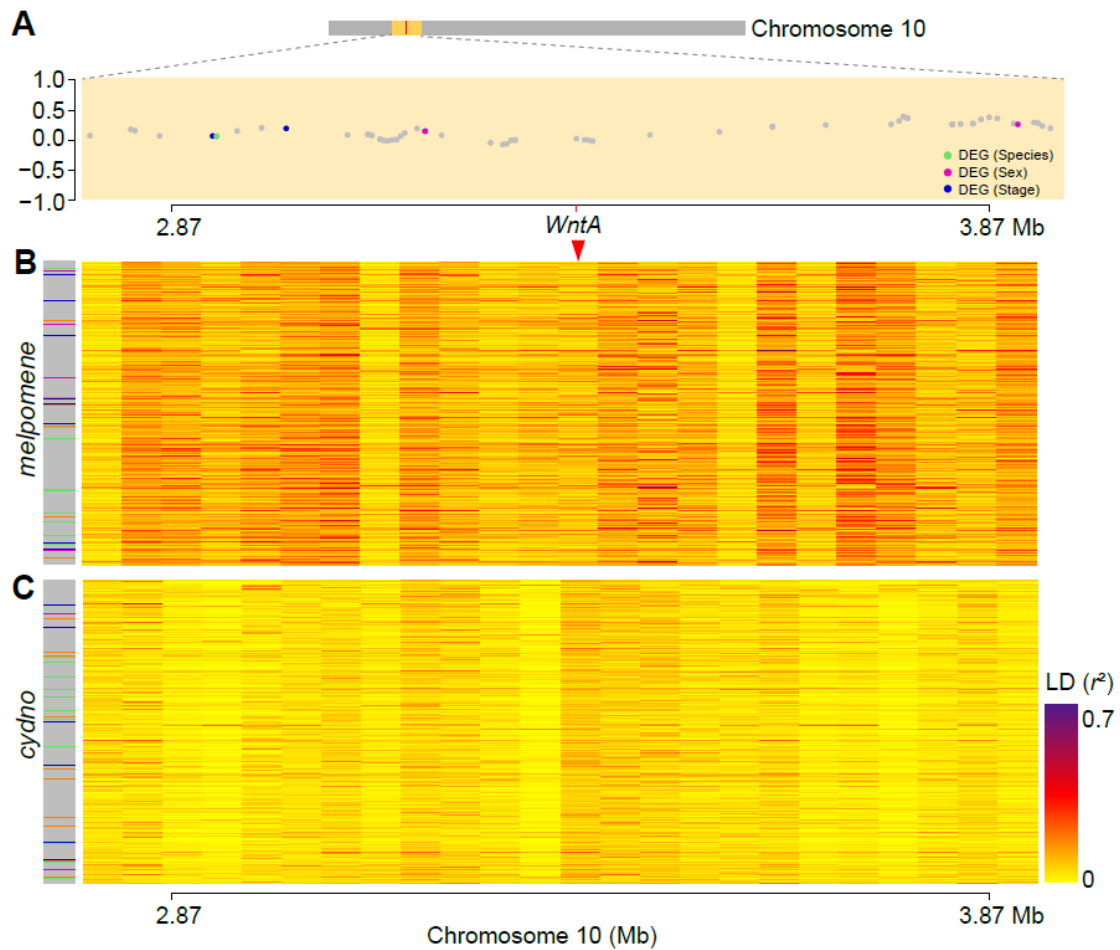
upregulated genes in 5-day-old female antennae in *H. melpomene*. BP, CC, and MF refer to the biological process, cellular component, and molecular function categories, respectively. The bar plots indicate the hit counts of GO terms. * indicates $P < 0.05$, ** indicates $P < 0.01$, and *** indicates $P < 0.001$.



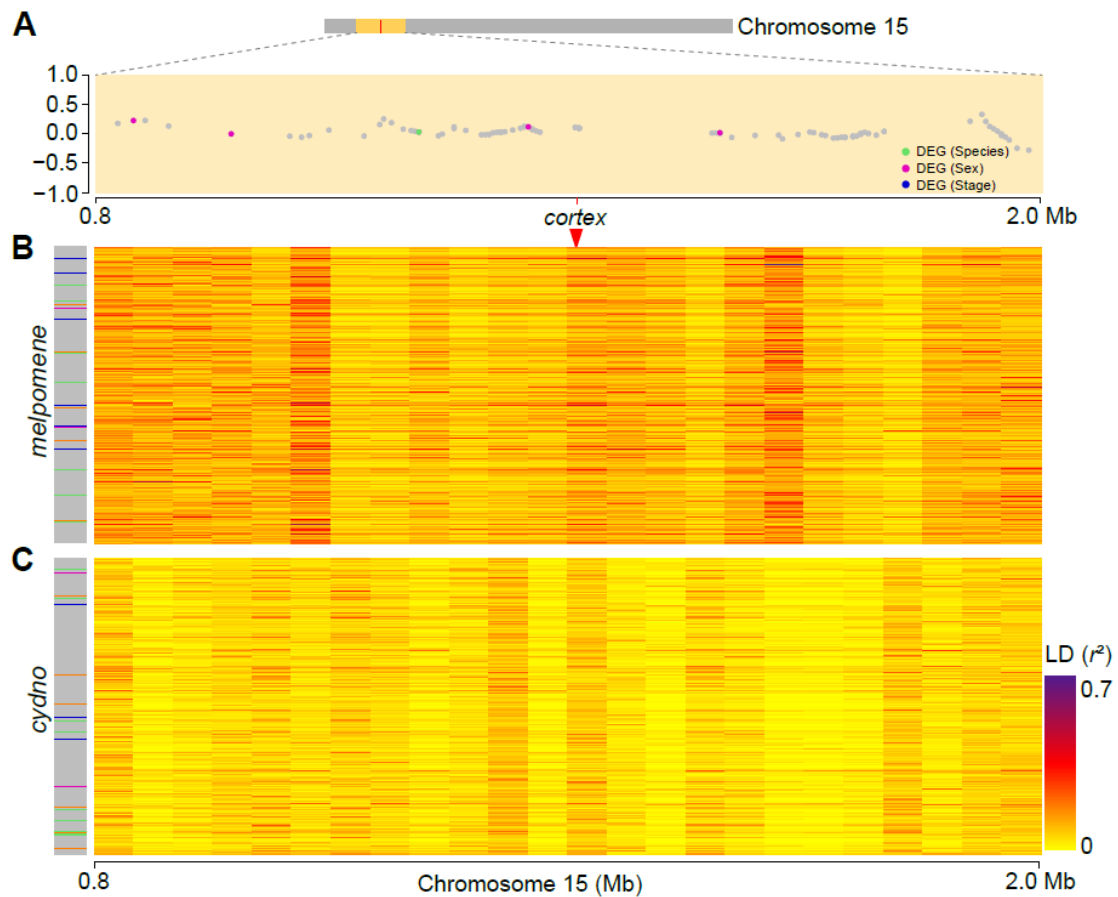
Supplementary Figure 8. Gene expression patterns in chemosensory tissues between five-day-old and two-day-old females. (A, B) Volcano plots showing differentially expressed genes between five-day-old and two-day-old females in antennae, legs, and mouthparts. **(C)** Histograms showing the expressed gene numbers when comparing five-day-old and two-day-old female tissues. The percentage refers to the proportion of chemosensory genes contained therein, if any.



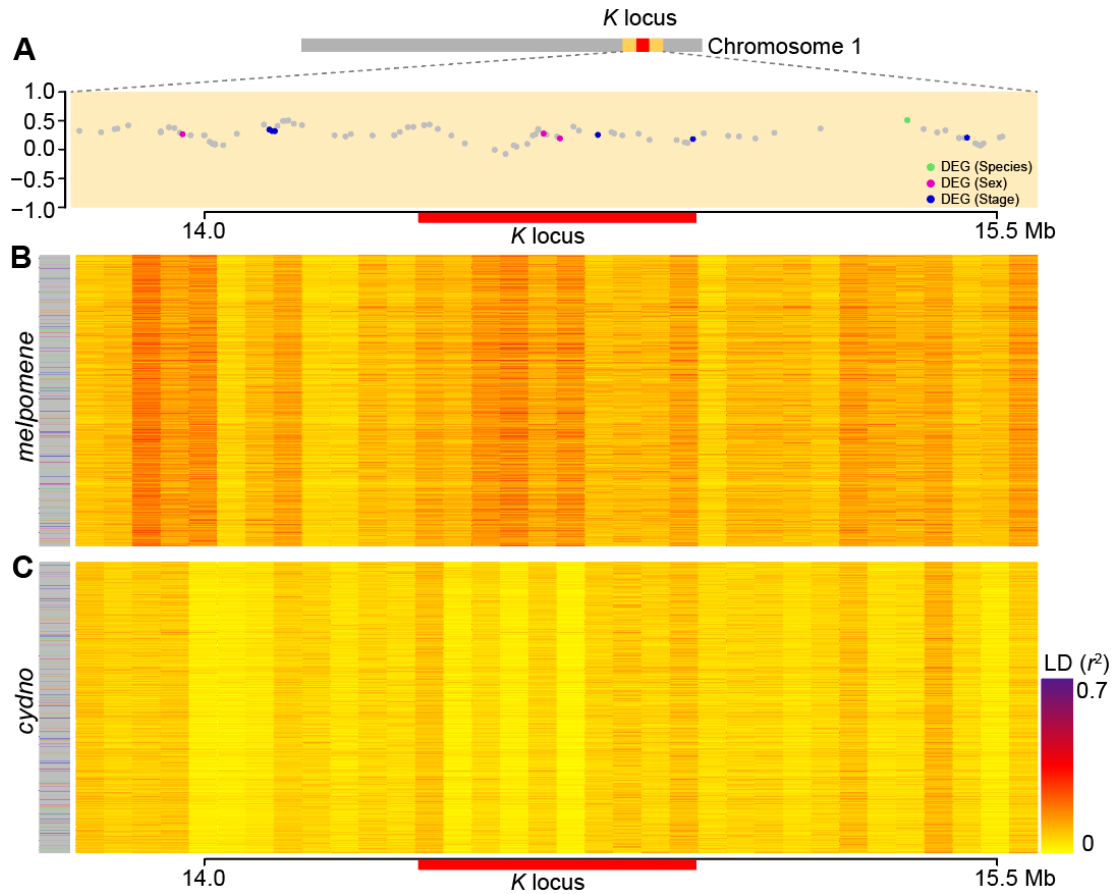
Supplementary Figure 9. Gene expression patterns in chemosensory tissues between five-day-old males and females. (A, B) Volcano plots showing differentially expressed genes between five-day-old males and females in antennae, legs, and mouthparts. **(C)** Histograms showing the expressed gene numbers when comparing male and female tissues. The percentage refers to the proportion of chemosensory genes contained therein, if any.



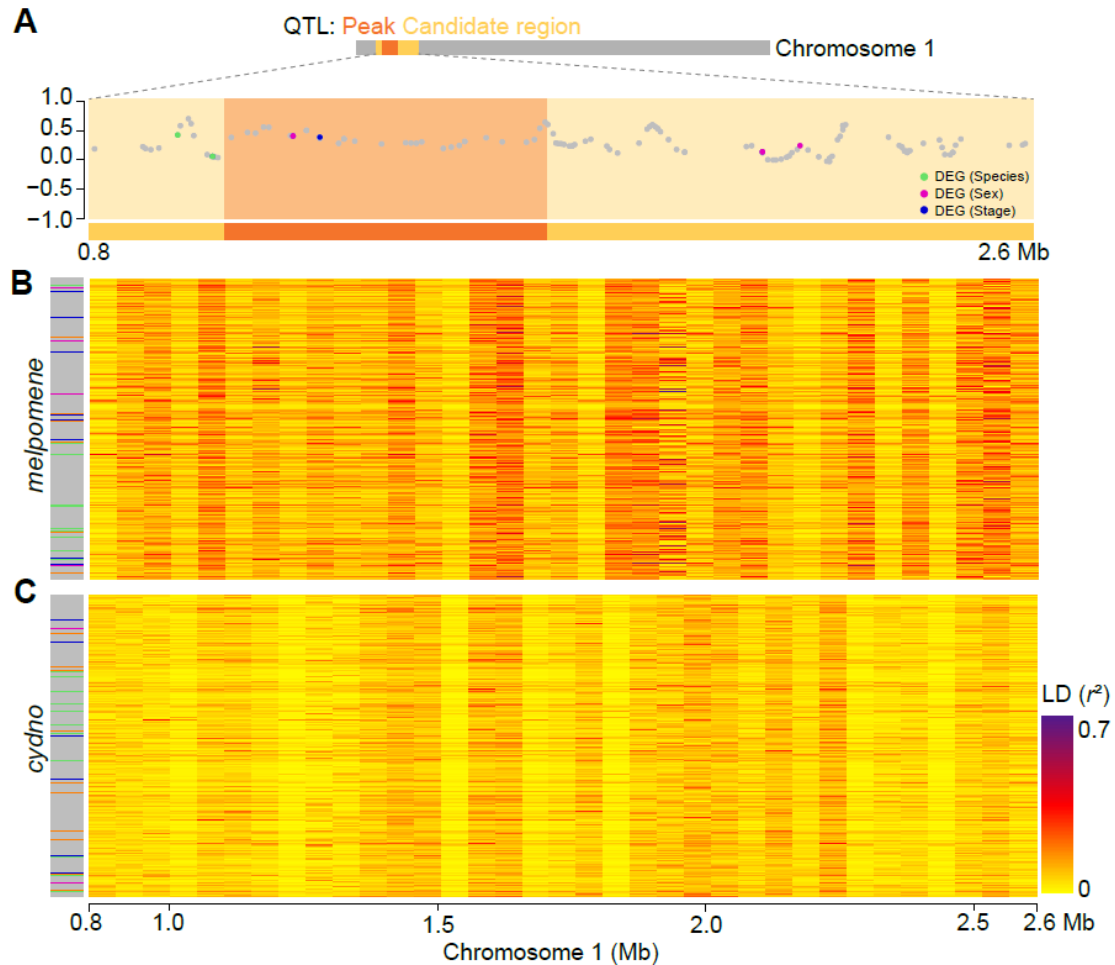
Supplementary Figure 10. Genomic divergence and differential expression of chemosensory tissues associated with the color-pattern gene *WntA*. (A) Non-introgressed and differentially expressed genes (DEGs) at the color-pattern gene *WntA* on chromosome 10. Gray points indicate non-DEGs. Green, purple, and blue points indicate DEGs. Points above the horizontal dotted line are introgressed genes ($f_d > 0$), while the others are non-introgressed ($f_d \leq 0$). Linkage disequilibrium (LD) map of genome-wide non-introgressed genes and the focal region containing *WntA* in *H. melpomene* (B) and *H. cydno* (C). Non-introgressed genes are ordered according to their f_d values. The x-axis corresponds to the physical positions shown in (A). The LD values (r^2) were calculated in 50 kb windows.



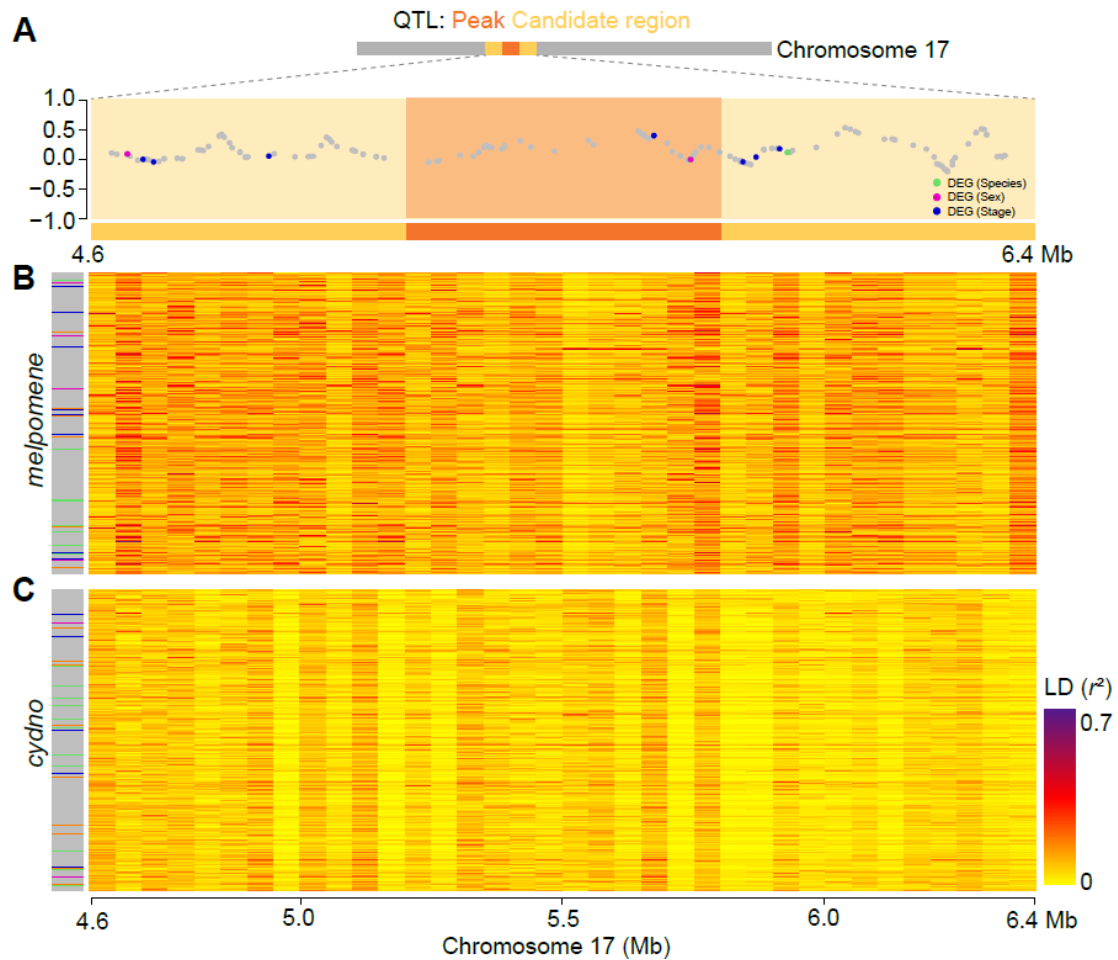
Supplementary Figure 11. Genomic divergence and differential expression of chemosensory tissues associated with the color-pattern gene *cortex*. (A) Non-introgressed and differentially expressed genes (DEGs) in the color-pattern gene *cortex* on chromosome 15. Gray points indicate non-DEGs. Green, purple, and blue points indicate DEGs. Points above the horizontal dotted line are introgressed genes ($f_d > 0$), while the others are non-introgressed ($f_d \leq 0$). Linkage disequilibrium (LD) map of genome-wide non-introgressed genes and the focal region containing the *cortex* in *H. melpomene* (B) and *H. cydno* (C). Non-introgressed genes are ordered according to their f_d values. The x -axis corresponds to the physical positions shown in (A). The LD values (r^2) were calculated in 50 kb windows.



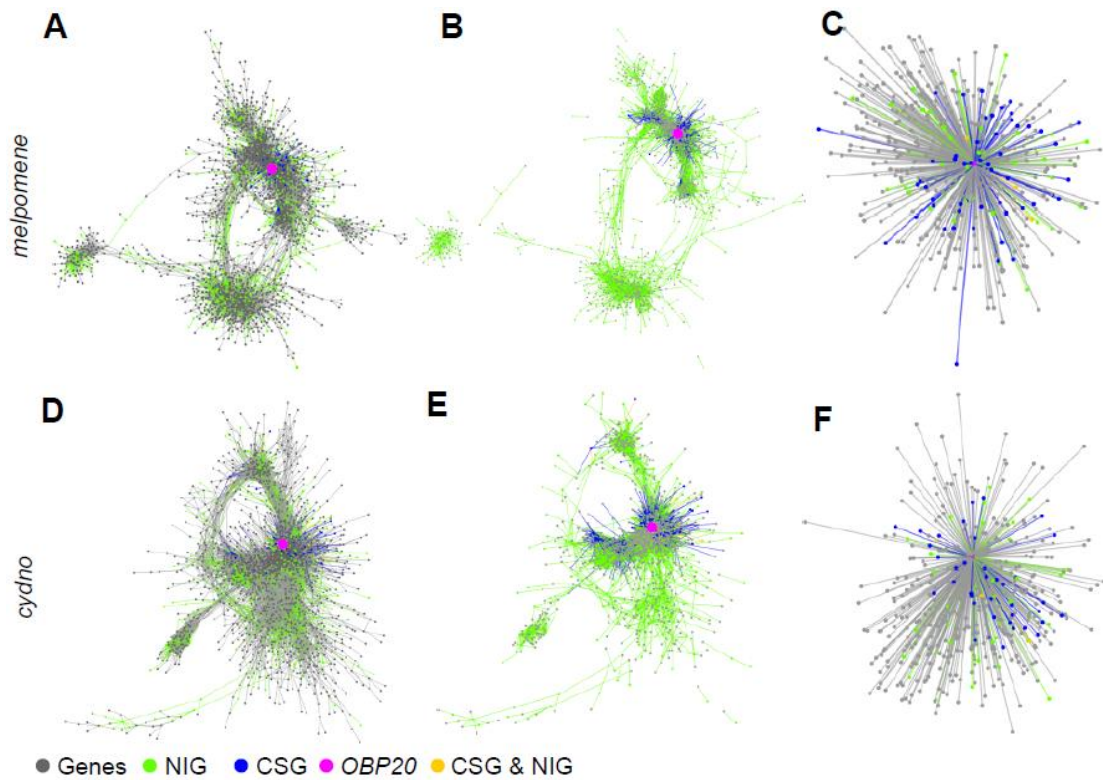
Supplementary Figure 12. Genomic divergence and differential expression of chemosensory tissues associated with the color-pattern locus *K*. (A) Non-introgressed and differentially expressed genes (DEGs) at the *K* locus on chromosome 1. Gray points indicate non-DEGs. Green, purple, and blue points indicate DEGs. Points above the horizontal dotted line are introgressed genes ($f_d > 0$), while the others are non-introgressed ($f_d \leq 0$). Linkage disequilibrium (LD) map of genome-wide non-introgressed genes and the focal region containing the *K* locus in *H. melpomene* (B) and *H. cydno* (C). Non-introgressed genes are ordered according to their f_d values. The x-axis corresponds to the physical positions shown in (A). The LD values (r^2) were calculated in 50 kb windows.



Supplementary Figure 13. Genomic divergence and differential expression of chemosensory tissues associated with mate preference QTLs on chromosome 1. (A) Non-introgressed and differentially expressed genes (DEGs) at the mate preference QTL on chromosome 1, including the QTL peak region and the nearby 1.5 log odds ratio candidate region. Gray points indicate non-DEGs. Green, purple, and blue points indicate DEGs. Points above the horizontal dotted line are introgressed genes ($f_d > 0$), while the others are non-introgressed ($f_d \leq 0$). Linkage disequilibrium (LD) map of genome-wide non-introgressed genes and mate preference QTLs in *H. melpomene* (B) and *H. cydno* (C). Non-introgressed genes are ordered according to their f_d values. The x -axis corresponds to the physical positions shown in (A). The LD values (r^2) were calculated in 50 kb windows.



Supplementary Figure 14. Genomic divergence and differential expression of chemosensory tissues associated with the mate preference QTL on chromosome 17, including the QTL peak region and the nearby 1.5 log odds ratio candidate region. (A) Non-introgressed and differentially expressed genes (DEGs) at the mate preference QTL on chromosome 17. Gray points indicate non-DEGs. Green, purple, and blue points indicate DEGs. Points above the horizontal dotted line are introgressed genes ($f_d > 0$), while the others are non-introgressed ($f_d \leq 0$). Linkage disequilibrium (LD) map of genome-wide non-introgressed genes and mate preference QTLs in *H. melpomene* **(B)** and *H. cydno* **(C)**. Non-introgressed genes are ordered according to their f_d values. The x -axis corresponds to the physical positions shown in **(A)**. The LD values (r^2) were calculated in 50 kb windows.



Supplementary Figure 15. Weighted gene coexpression (GC) networks for chemosensory genes (CSGs) and non-introgressed genes (NIGs). The main networks were constructed for *H. melpomene* (A) and *H. cydno* (C) chemosensory tissues, showing three major clusters interacting with each other and marked by solid circles. The filtered networks include CSGs and NIGs and their primary network partners in *H. melpomene* (B) and *H. cydno* (E). *OBP20* and its primary network partners are illustrated in *H. melpomene* (C) and *H. cydno* (F). Green dots, non-introgressed genes; blue dots, chemosensory genes; pink dots, *OBP20*; yellow dots, non-introgressed chemosensory genes; gray dots, genes involved in networks. Green edges, interactions involving NIGs; blue edges, interactions involving CSGs; yellow edges, interactions involving CSGs and NIGs; gray edges, interactions with other genes.

Supplementary Table 1. Sample information and sequencing statistics.

Sample	Data Source	Taxon	Age (days old)	Sex	Tissue	Reads (Mb)	Alignment Rate
M9P	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	mouthparts	309.6	96.2
M9L	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	legs	467.0	97.6
M9A	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	antennae	413.8	96.8
C25A	PRJNA577441	<i>H. cydno</i>	2	female (day two)	antenna	378.5	96.5
M44P	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	mouthparts	498.7	96.2
M44L	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	legs	314.4	97.7
M44A	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	antennae	381.1	96.8
M43P	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	mouthparts	424.0	96.5
M43L	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	legs	423.6	97.6
M41P	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	mouthparts	303.9	95.5
M41L	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	legs	574.0	97.6
M41A	PRJNA577441	<i>H. melpomene</i>	5	female (day five)	antennae	383.8	96.8
M37P	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	mouthparts	405.9	96.3
C24P	PRJNA577441	<i>H. cydno</i>	2	female (day two)	mouthparts	281.8	96.7
M37L	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	legs	511.8	97.9
M37A	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	antennae	371.7	97.1
M35P	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	mouthparts	410.8	96.1
M35L	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	legs	640.9	97.7
M35A	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	antennae	378.8	96.8
M32P	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	mouthparts	304.0	96.5
M32L	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	legs	523.7	97.8
M32A	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	antennae	272.9	96.9
M26P	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	mouthparts	347.9	94.7

M26L	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	legs	335.0	97.5
C24L	PRJNA577441	<i>H. cydno</i>	2	female (day two)	legs	424.5	98.1
M26A	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	antennae	348.8	97.0
M25P	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	mouthparts	557.2	96.0
M25L	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	legs	486.4	97.5
M25A	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	antennae	529.3	96.6
M23P	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	mouthparts	556.5	96.2
M23L	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	legs	413.6	97.6
M23A	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	antennae	376.5	96.8
M22P	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	mouthparts	445.2	96.2
M22L	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	legs	561.9	97.7
M22A	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	antennae	620.3	96.9
C24A	PRJNA577441	<i>H. cydno</i>	2	female (day two)	antennae	506.7	97.0
M21P	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	mouthparts	395.2	95.7
M21L	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	legs	592.7	97.2
M21A	PRJNA577441	<i>H. melpomene</i>	2	female (day two)	antennae	413.7	97.1
M20P	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	mouthparts	403.5	95.5
M20L	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	legs	399.9	97.5
M20A	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	antennae	379.9	95.9
M19L	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	legs	432.1	97.7
M19A	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	antennae	391.3	97.1
M10P	PRJNA577441	<i>H. melpomene</i>	5	female (mated)	mouthparts	359.5	95.8
C23P	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	mouthparts	314.7	96.8
M10L	PRJNA577441	<i>H. melpomene</i>	5	female (mated)	legs	357.2	97.6
M10A	PRJNA577441	<i>H. melpomene</i>	5	female (mated)	antennae	417.2	96.1
C9P	PRJNA577441	<i>H. cydno</i>	5	female (mated)	mouthparts	416.7	95.3

C9L	PRJNA577441	<i>H. cydno</i>	5	female (mated)	legs	519.9	97.8
C9A	PRJNA577441	<i>H. cydno</i>	5	female (mated)	antennae	253.7	96.8
C8P	PRJNA577441	<i>H. cydno</i>	5	female (mated)	mouthparts	220.2	95.5
C8L	PRJNA577441	<i>H. cydno</i>	5	female (mated)	legs	318.7	97.4
C8A	PRJNA577441	<i>H. cydno</i>	5	female (mated)	antennae	344.4	96.6
C6P	PRJNA577441	<i>H. cydno</i>	5	female (mated)	mouthparts	268.8	95.1
C6L	PRJNA577441	<i>H. cydno</i>	5	female (mated)	legs	459.4	97.7
C23L	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	legs	704.9	97.8
C6A	PRJNA577441	<i>H. cydno</i>	5	female (mated)	antennae	336.3	96.7
C5P	PRJNA577441	<i>H. cydno</i>	5	female (mated)	mouthparts	260.1	96.4
C5L	PRJNA577441	<i>H. cydno</i>	5	female (mated)	legs	472.4	97.6
C5A	PRJNA577441	<i>H. cydno</i>	5	female (mated)	antennae	278.3	96.8
C4P	PRJNA577441	<i>H. cydno</i>	5	female (mated)	mouthparts	243.1	96.3
C4L	PRJNA577441	<i>H. cydno</i>	5	female (mated)	legs	818.0	97.9
C4A	PRJNA577441	<i>H. cydno</i>	5	female (mated)	antennae	248.4	96.8
C3P	PRJNA577441	<i>H. cydno</i>	5	female (mated)	mouthparts	189.8	96.7
C3L	PRJNA577441	<i>H. cydno</i>	5	female (mated)	legs	372.3	97.9
C3A	PRJNA577441	<i>H. cydno</i>	5	female (mated)	antennae	260.6	96.7
C23A	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	antennae	285.3	96.6
C36P	PRJNA577441	<i>H. cydno</i>	5	male (day five)	mouthparts	408.4	95.6
C36L	PRJNA577441	<i>H. cydno</i>	5	male (day five)	legs	1,026.0	97.9
C36A	PRJNA577441	<i>H. cydno</i>	5	male (day five)	antennae	353.2	96.6
C35P	PRJNA577441	<i>H. cydno</i>	5	male (day five)	mouthparts	414.1	95.8
C35L	PRJNA577441	<i>H. cydno</i>	5	male (day five)	legs	782.9	97.9
C35A	PRJNA577441	<i>H. cydno</i>	5	male (day five)	antennae	370.7	96.8
C33P	PRJNA577441	<i>H. cydno</i>	5	male (day five)	mouthparts	243.9	96.3

C33L	PRJNA577441	<i>H. cydno</i>	5	male (day five)	legs	255.7	97.6
C33A	PRJNA577441	<i>H. cydno</i>	5	male (day five)	antennae	244.5	96.5
C32P	PRJNA577441	<i>H. cydno</i>	5	male (day five)	mouthparts	356.9	96.0
C21P	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	mouthparts	338.9	96.8
C32L	PRJNA577441	<i>H. cydno</i>	5	male (day five)	legs	663.3	97.8
C32A	PRJNA577441	<i>H. cydno</i>	5	male (day five)	antennae	252.8	96.7
C31P	PRJNA577441	<i>H. cydno</i>	5	male (day five)	mouthparts	357.1	96.7
C31L	PRJNA577441	<i>H. cydno</i>	5	male (day five)	legs	303.6	98.0
C31A	PRJNA577441	<i>H. cydno</i>	5	male (day five)	antennae	368.3	96.9
C26P	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	mouthparts	387.3	96.4
C26L	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	legs	609.7	97.8
C26A	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	antennae	395.5	96.4
C25P	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	mouthparts	360.4	96.5
C25L	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	legs	314.0	97.9
C21L	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	legs	426.5	97.9
C21A	PRJNA577441	<i>H. cydno</i>	2	female (unmated)	antennae	309.9	96.2
M43A	PRJNA577441	<i>H. melpomene</i>	5	female (mated)	antennae	430.6	97.1
M19P	PRJNA577441	<i>H. melpomene</i>	5	male (day five)	mouthparts	460.7	94.7
J_5	SAMN30448756	<i>H. charitonia</i>	5	male (day five)	antennae	1,279.9	57.8
J_6	SAMN30448757	<i>H. charitonia</i>	5	male (day five)	antennae	3,382.1	60.2
J_7	SAMN30448758	<i>H. charitonia</i>	5	male (day five)	antennae	2,996.7	56.7
J_8	SAMN30448759	<i>H. charitonia</i>	5	male (day five)	antennae	3,844.8	55.3
J_9	SAMN30448760	<i>H. charitonia</i>	5	male (day five)	antennae	1,998.6	55.0
J_10	SAMN30448761	<i>H. charitonia</i>	5	female (mated)	antennae	3,204.2	57.6
J_11	SAMN30448762	<i>H. charitonia</i>	5	female (mated)	antennae	1,801.4	56.3
J_12	SAMN30448763	<i>H. charitonia</i>	5	female (mated)	antennae	3,113.7	63.2

J_13	SAMN30448764	<i>H. charitonia</i>	5	female (mated)	antennae	3,512.7	55.9
J_14	SAMN30448765	<i>H. charitonia</i>	5	female (mated)	antennae	2,710.1	60.5
J_15	SAMN30448766	<i>H. charitonia</i>	2	female (unmated)	antennae	4,448.1	57.9
J_17	SAMN30448767	<i>H. charitonia</i>	2	female (unmated)	antennae	3,607.8	58.8
J_18	SAMN30448768	<i>H. charitonia</i>	2	female (unmated)	antennae	4,233.9	57.4
J_19	SAMN30448769	<i>H. charitonia</i>	2	female (unmated)	antennae	4,684.7	62.0
J_20	SAMN30448770	<i>H. charitonia</i>	5	male (day five)	hindlegs	3,242.2	58.1
J_21	SAMN30448771	<i>H. charitonia</i>	5	male (day five)	hindlegs	2,974.3	60.9
J_22	SAMN30448772	<i>H. charitonia</i>	5	male (day five)	hindlegs	2,347.8	65.9
J_23	SAMN30448773	<i>H. charitonia</i>	5	male (day five)	hindlegs	4,036.2	62.1
J_24	SAMN30448774	<i>H. charitonia</i>	5	male (day five)	hindlegs	6,160.2	64.1
J_25	SAMN30448775	<i>H. charitonia</i>	5	female (mated)	hindlegs	3,473.7	66.6
J_26	SAMN30448776	<i>H. charitonia</i>	5	female (mated)	hindlegs	4,199.8	63.8
J_27	SAMN30448777	<i>H. charitonia</i>	5	female (mated)	hindlegs	3,938.5	61.6
J_28	SAMN30448778	<i>H. charitonia</i>	5	female (mated)	hindlegs	2,836.9	63.4
J_29	SAMN30448779	<i>H. charitonia</i>	5	female (mated)	hindlegs	5,109.4	62.4
J_30	SAMN30448780	<i>H. charitonia</i>	2	female (unmated)	hindlegs	4,100.5	59.3
J_31	SAMN30448781	<i>H. charitonia</i>	2	female (unmated)	hindlegs	2,056.2	61.4
J_32	SAMN30448782	<i>H. charitonia</i>	2	female (unmated)	hindlegs	4912.4	62.9
J_33	SAMN30448783	<i>H. charitonia</i>	2	female (unmated)	hindlegs	4,037.7	62.2
J_34	SAMN30448784	<i>H. charitonia</i>	2	female (unmated)	hindlegs	6,046.5	62.8
J_35	SAMN30448785	<i>H. charitonia</i>	5	female (mated)	forelegs	3,471.2	65.1
J_36	SAMN30448786	<i>H. charitonia</i>	5	female (mated)	forelegs	11,874.6	65.0
J_37	SAMN30448787	<i>H. charitonia</i>	5	female (mated)	forelegs	3,686.2	65.5
J_38	SAMN30448788	<i>H. charitonia</i>	5	female (mated)	forelegs	8,478.5	64.0
J_39	SAMN30448789	<i>H. charitonia</i>	5	female (mated)	forelegs	2,705.7	68.8

J_40	SAMN30448790	<i>H. charitonia</i>	5	male	forelegs	1,786.8	62.6
J_41	SAMN30448791	<i>H. charitonia</i>	5	male	forelegs	2,787.0	65.2
J_42	SAMN30448792	<i>H. charitonia</i>	5	male	forelegs	2,149.7	62.6
J_43	SAMN30448793	<i>H. charitonia</i>	5	male	forelegs	3,620.8	56.4
J_44	SAMN30448794	<i>H. charitonia</i>	5	male	forelegs	6,618.4	64.8
J_50	SAMN30448795	<i>H. charitonia</i>	2	female (unmated)	antennae	3,962.1	61.7
J_51	SAMN30448796	<i>H. charitonia</i>	2	female (unmated)	forelegs	2,912.7	65.6
J_52	SAMN30448797	<i>H. charitonia</i>	2	female (unmated)	forelegs	4,415.1	63.9
J_53	SAMN30448798	<i>H. charitonia</i>	2	female (unmated)	forelegs	1,087.9	63.6
J_54	SAMN30448799	<i>H. charitonia</i>	2	female (unmated)	forelegs	2,964.9	64.6
J_55	SAMN30448800	<i>H. charitonia</i>	2	female (unmated)	forelegs	1,279.9	64.1

Supplementary Table 2. Transcriptome analysis results.

Taxon	Tissue	Sex	Expressed Genes	Expressed Chemosensory Genes (CSP/GR/IR/OBP/OR)
<i>H. melpomene</i>	antennae	female (day two)	11868	132 (21/5/21/33/52)
		female (day five)	11641	127 (20/5/20/35/47)
		male (day five)	11559	127 (17/9/20/32/49)
	legs	female (day two)	11924	81 (23/14/12/24/8)
		female (day five)	11720	79 (19/9/11/29/11)
		male (day five)	11933	71 (20/6/12/24/9)
	mouthparts	female (day two)	11784	84 (23/15/10/24/12)
		female (day five)	10589	63 (19/8/7/22/7)
		male (day five)	11457	74 (20/13/9/22/10)
	antennae	female (day two)	11502	111 (18/5/19/31/38)
		female (day five)	11221	116 (19/5/19/31/42)
		male (day five)	11450	124 (20/5/19/31/49)
<i>H. cydno</i>	legs	female (day two)	11425	59 (18/12/6/20/3)
		female (day five)	11561	71 (20/11/8/27/5)
		male (day five)	11647	62 (18/6/13/21/4)
	mouthparts	female (day two)	11335	65 (22/11/7/21/4)
		female (day five)	10735	52 (19/5/4/21/3)
		male (day five)	11266	63 (20/7/8/24/4)

Note. – Genes that were expressed in three replicates were taken into account. CSP, chemosensory protein; GR, gustatory receptor; IR, ionotropic receptor; OBP, olfactory binding receptor; OR, olfactor receptor.

Supplementary Table 3. GO enrichment analysis of upregulated antenna genes in both *H. cydno* and *H. melpomene*.

ID	Number	Class	Description	P value	Q value
GO:0005549	24	Molecular Function	odorant binding	5.59E-16	1.26E-13
GO:0005506	17	Molecular Function	iron ion binding	1.89E-06	2.13E-04
GO:0016491	35	Molecular Function	oxidoreductase activity	6.26E-06	4.71E-04
GO:0046906	16	Molecular Function	tetrapyrrole binding	1.56E-05	8.83E-04
GO:0016705	15	Molecular Function	oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen	3.26E-05	1.45E-03
GO:0048037	16	Molecular Function	cofactor binding	4.20E-05	1.45E-03
GO:0022857	38	Molecular Function	transmembrane transporter activity	5.16E-05	1.45E-03
GO:0020037	15	Molecular Function	heme binding	5.76E-05	1.45E-03
GO:0004984	9	Molecular Function	olfactory receptor activity	5.77E-05	1.45E-03
GO:0052689	9	Molecular Function	carboxylic ester hydrolase activity	9.38E-05	2.12E-03
GO:0005215	38	Molecular Function	transporter activity	1.05E-04	2.16E-03
GO:0050660	11	Molecular Function	flavin adenine dinucleotide binding	1.28E-04	2.41E-03
GO:0099600	21	Molecular Function	transmembrane receptor activity	1.81E-04	3.15E-03
GO:0004872	21	Molecular Function	receptor activity	2.25E-04	3.31E-03
GO:0060089	21	Molecular Function	molecular transducer activity	2.25E-04	3.31E-03
GO:0008241	4	Molecular Function	peptidyl-dipeptidase activity	2.34E-04	3.31E-03
GO:0016298	8	Molecular Function	lipase activity	4.74E-04	6.29E-03
GO:0050662	12	Molecular Function	coenzyme binding	8.16E-04	1.02E-02
GO:0004888	18	Molecular Function	transmembrane signaling receptor activity	1.55E-03	1.84E-02
GO:0038023	18	Molecular Function	signaling receptor activity	1.73E-03	1.96E-02

GO:0004806	6	Molecular Function	triglyceride lipase activity	2.13E-03	2.30E-02
GO:0004871	18	Molecular Function	signal transducer activity	2.65E-03	2.72E-02
GO:0016020	77	Cellular Component	membrane	4.34E-12	3.34E-10
GO:0044699	113	Biological Process	single-organism process	1.59E-07	5.08E-05
GO:0044765	49	Biological Process	single-organism transport	6.06E-06	7.13E-04
GO:1902578	49	Biological Process	single-organism localization	6.70E-06	7.13E-04
GO:0006810	51	Biological Process	transport	2.55E-05	1.73E-03
GO:0051234	51	Biological Process	establishment of localization	2.71E-05	1.73E-03
GO:0051179	51	Biological Process	localization	3.42E-05	1.82E-03
GO:0055114	34	Biological Process	oxidation-reduction process	5.54E-05	2.52E-03
GO:0007608	9	Biological Process	sensory perception of smell	1.29E-04	5.14E-03
GO:0044710	56	Biological Process	single-organism metabolic process	2.60E-04	9.21E-03
GO:0055085	35	Biological Process	transmembrane transport	3.23E-04	1.03E-02

Supplementary Table 4. GO enrichment analysis of upregulated leg genes in both *H. cydno* and *H. melpomene*.

ID	Number	Class	Description	P value	Q value
GO:0005216	17	Molecular Function	ion channel activity	7.15E-08	5.13E-06
GO:0022838	17	Molecular Function	substrate-specific channel activity	7.15E-08	5.13E-06
GO:0015075	22	Molecular Function	ion transmembrane transporter activity	1.31E-07	5.13E-06
GO:0015276	11	Molecular Function	ligand-gated ion channel activity	1.33E-07	5.13E-06
GO:0022834	11	Molecular Function	ligand-gated channel activity	1.33E-07	5.13E-06
GO:0015267	17	Molecular Function	channel activity	1.53E-07	5.13E-06
GO:0022803	17	Molecular Function	passive transmembrane transporter activity	1.53E-07	5.13E-06
GO:0022891	22	Molecular Function	substrate-specific transmembrane transporter activity	1.85E-07	5.41E-06
GO:0022892	22	Molecular Function	substrate-specific transporter activity	4.94E-07	1.28E-05
GO:0022836	12	Molecular Function	gated channel activity	3.81E-06	8.92E-05
GO:0005230	7	Molecular Function	extracellular ligand-gated ion channel activity	4.50E-05	9.56E-04
GO:0004449	3	Molecular Function	isocitrate dehydrogenase (NAD ⁺) activity	4.92E-05	9.58E-04
GO:0022857	27	Molecular Function	transmembrane transporter activity	7.06E-05	1.27E-03
GO:0016651	5	Molecular Function	oxidoreductase activity, acting on NAD(P)H	8.49E-05	1.42E-03
GO:0005215	27	Molecular Function	transporter activity	1.24E-04	1.93E-03
GO:0004448	3	Molecular Function	isocitrate dehydrogenase activity	1.68E-04	2.45E-03
GO:0005219	3	Molecular Function	ryanodine-sensitive calcium-release channel activity	2.65E-04	3.65E-03
GO:0016616	5	Molecular Function	oxidoreductase activity, acting on the CH-OH group of donors, NAD or NADP as acceptor	3.99E-04	5.19E-03
GO:0015085	5	Molecular Function	calcium ion transmembrane transporter activity	5.13E-04	6.32E-03
GO:0008324	12	Molecular Function	cation transmembrane transporter activity	5.75E-04	6.44E-03

GO:0072509	5	Molecular Function	divalent inorganic cation transmembrane transporter activity	5.78E-04	6.44E-03
GO:0016491	21	Molecular Function	oxidoreductase activity	8.01E-04	7.96E-03
GO:0003779	6	Molecular Function	actin binding	9.23E-04	7.96E-03
GO:0051287	4	Molecular Function	NAD binding	9.48E-04	7.96E-03
GO:0005217	3	Molecular Function	intracellular ligand-gated ion channel activity	9.89E-04	7.96E-03
GO:0015278	3	Molecular Function	calcium-release channel activity	9.89E-04	7.96E-03
GO:0099604	3	Molecular Function	ligand-gated calcium channel activity	9.89E-04	7.96E-03
GO:0051536	5	Molecular Function	iron-sulfur cluster binding	1.00E-03	7.96E-03
GO:0051540	5	Molecular Function	metal cluster binding	1.00E-03	7.96E-03
GO:0022890	11	Molecular Function	inorganic cation transmembrane transporter activity	1.02E-03	7.96E-03
GO:0005388	2	Molecular Function	calcium-transporting ATPase activity	1.74E-03	1.31E-02
GO:0051015	4	Molecular Function	actin filament binding	2.64E-03	1.92E-02
GO:0032440	2	Molecular Function	2-alkenal reductase [NAD(P)] activity	2.86E-03	1.92E-02
GO:0047522	2	Molecular Function	15-oxoprostaglandin 13-oxidase activity	2.86E-03	1.92E-02
GO:0005057	3	Molecular Function	receptor signaling protein activity	2.87E-03	1.92E-02
GO:0046873	8	Molecular Function	metal ion transmembrane transporter activity	3.24E-03	2.11E-02
GO:0005261	7	Molecular Function	cation channel activity	3.66E-03	2.31E-02
GO:0004970	3	Molecular Function	ionotropic glutamate receptor activity	3.99E-03	2.39E-02
GO:0008066	3	Molecular Function	glutamate receptor activity	3.99E-03	2.39E-02
GO:0016628	2	Molecular Function	oxidoreductase activity, acting on the CH-CH group of donors, NAD or NADP as acceptor	4.25E-03	2.48E-02
GO:0016614	6	Molecular Function	oxidoreductase activity, acting on CH-OH group of donors	4.52E-03	2.58E-02

GO:0015662	2	Molecular Function	ATPase activity, coupled to transmembrane movement of ions, phosphorylative mechanism	5.88E-03	3.27E-02
GO:0009055	4	Molecular Function	electron carrier activity	6.77E-03	3.69E-02
GO:0099600	12	Molecular Function	transmembrane receptor activity	8.94E-03	4.76E-02
GO:0015629	8	Cellular Component	actin cytoskeleton	2.58E-05	1.58E-03
GO:0044430	10	Cellular Component	cytoskeletal part	3.60E-05	1.58E-03
GO:0005856	10	Cellular Component	cytoskeleton	6.50E-05	1.91E-03
GO:0016459	5	Cellular Component	myosin complex	6.57E-04	8.07E-03
GO:0005861	3	Cellular Component	troponin complex	1.01E-03	8.07E-03
GO:0005865	3	Cellular Component	striated muscle thin filament	1.01E-03	8.07E-03
GO:0030016	3	Cellular Component	myofibril	1.01E-03	8.07E-03
GO:0030017	3	Cellular Component	sarcomere	1.01E-03	8.07E-03
GO:0036379	3	Cellular Component	myofilament	1.01E-03	8.07E-03
GO:0043292	3	Cellular Component	contractile fiber	1.01E-03	8.07E-03
GO:0044449	3	Cellular Component	contractile fiber part	1.01E-03	8.07E-03
GO:0009331	2	Cellular Component	glycerol-3-phosphate dehydrogenase complex	1.34E-03	9.80E-03
GO:1990204	3	Cellular Component	oxidoreductase complex	4.29E-03	2.91E-02
GO:0006811	24	Biological Process	ion transport	7.82E-09	2.15E-06
GO:0006099	7	Biological Process	tricarboxylic acid cycle	6.44E-08	5.91E-06
GO:0009060	7	Biological Process	aerobic respiration	6.44E-08	5.91E-06
GO:0006101	7	Biological Process	citrate metabolic process	1.23E-07	8.45E-06
GO:0006091	9	Biological Process	generation of precursor metabolites and energy	1.91E-07	1.01E-05
GO:0072350	7	Biological Process	tricarboxylic acid metabolic	2.21E-07	1.01E-05

		Process	process		
GO:0045333	7	Biological Process	cellular respiration	7.81E-07	3.07E-05
GO:0015980	7	Biological Process	energy derivation by oxidation of organic compounds	1.83E-06	6.30E-05
GO:0044699	65	Biological Process	single-organism process	7.85E-06	2.40E-04
GO:0034220	11	Biological Process	ion transmembrane transport	2.09E-05	5.74E-04
GO:0006082	12	Biological Process	organic acid metabolic process	8.85E-05	1.87E-03
GO:0019752	12	Biological Process	carboxylic acid metabolic process	8.85E-05	1.87E-03
GO:0043436	12	Biological Process	oxoacid metabolic process	8.85E-05	1.87E-03
GO:0044765	29	Biological Process	single-organism transport	1.30E-04	2.52E-03
GO:1902578	29	Biological Process	single-organism localization	1.38E-04	2.52E-03
GO:0030001	11	Biological Process	metal ion transport	1.47E-04	2.52E-03
GO:0006812	13	Biological Process	cation transport	2.12E-04	3.43E-03
GO:0055114	21	Biological Process	oxidation-reduction process	3.07E-04	4.69E-03
GO:0006816	5	Biological Process	calcium ion transport	3.65E-04	5.28E-03
GO:0070838	5	Biological Process	divalent metal ion transport	4.15E-04	5.43E-03
GO:0072511	5	Biological Process	divalent inorganic cation transport	4.15E-04	5.43E-03
GO:0006810	29	Biological Process	transport	8.57E-04	1.06E-02
GO:0051234	29	Biological Process	establishment of localization	8.87E-04	1.06E-02
GO:0051179	29	Biological Process	localization	1.02E-03	1.17E-02
GO:0006874	2	Biological Process	cellular calcium ion homeostasis	1.69E-03	1.66E-02
GO:0055074	2	Biological Process	calcium ion homeostasis	1.69E-03	1.66E-02
GO:0072503	2	Biological Process	cellular divalent inorganic cation homeostasis	1.69E-03	1.66E-02
GO:0072507	2	Biological Process	divalent inorganic cation	1.69E-03	1.66E-02

GO:0070588	4	Biological Process	homeostasis calcium ion transmembrane transport	2.22E-03	2.10E-02
GO:0044281	15	Biological Process	small molecule metabolic process	2.62E-03	2.40E-02
GO:0006072	2	Biological Process	glycerol-3-phosphate metabolic process	2.79E-03	2.47E-02
GO:0006873	2	Biological Process	cellular ion homeostasis	5.72E-03	4.37E-02
GO:0006875	2	Biological Process	cellular metal ion homeostasis	5.72E-03	4.37E-02
GO:0030003	2	Biological Process	cellular cation homeostasis	5.72E-03	4.37E-02
GO:0052646	2	Biological Process	alditol phosphate metabolic process	5.72E-03	4.37E-02
GO:0055082	2	Biological Process	cellular chemical homeostasis	5.72E-03	4.37E-02
GO:0015672	8	Biological Process	monovalent inorganic cation transport	6.26E-03	4.65E-02

Supplementary Table 5. GO enrichment analysis of upregulated mouthpart genes in both *H. cydno* and *H. melpomene*.

ID	Number	Class	Description	P value	Q value
GO:0016620	4	Molecular Function	oxidoreductase activity, acting on the aldehyde or oxo group of donors, NAD or NADP as acceptor	6.52E-05	1.02E-02
GO:0003824	55	Molecular Function	catalytic activity	1.31E-04	1.03E-02
GO:0016903	4	Molecular Function	oxidoreductase activity, acting on the aldehyde or oxo group of donors	2.22E-04	1.16E-02
GO:0046912	2	Molecular Function	transferase activity, transferring acyl groups, acyl groups converted into alkyl on transfer	7.52E-04	2.49E-02
GO:0016831	3	Molecular Function	carboxy-lyase activity	8.55E-04	2.49E-02
GO:0042302	8	Molecular Function	structural constituent of cuticle	9.50E-04	2.49E-02
GO:0016830	3	Molecular Function	carbon-carbon lyase activity	1.62E-03	3.63E-02
GO:0016491	15	Molecular Function	oxidoreductase activity	1.86E-03	3.65E-02
GO:0031984	2	Cellular Component	organelle subcompartment	1.85E-03	3.79E-02
GO:0098791	2	Cellular Component	Golgi subcompartment	1.85E-03	3.79E-02
GO:0005794	3	Cellular Component	Golgi apparatus	2.96E-03	3.79E-02
GO:0005890	2	Cellular Component	sodium:potassium-exchanging ATPase complex	4.35E-03	3.79E-02
GO:0090533	2	Cellular Component	cation-transporting ATPase complex	4.35E-03	3.79E-02
GO:0016020	25	Cellular Component	membrane	4.62E-03	3.79E-02
GO:0098533	2	Cellular Component	ATPase dependent transmembrane transport complex	5.40E-03	3.79E-02
GO:1904949	2	Cellular Component	ATPase complex	5.40E-03	3.79E-02
GO:0044425	19	Cellular Component	membrane part	5.88E-03	3.79E-02
GO:0008299	6	Biological Process	isoprenoid biosynthetic process	1.51E-07	2.00E-05
GO:0006720	6	Biological Process	isoprenoid metabolic process	2.10E-07	2.00E-05
GO:0008610	7	Biological Process	lipid biosynthetic process	1.69E-05	1.07E-03

GO:0006629	10	Biological Process	lipid metabolic process	2.14E-04	1.02E-02
GO:0044255	7	Biological Process	cellular lipid metabolic process	5.01E-04	1.25E-02
GO:0006084	2	Biological Process	acetyl-CoA metabolic process	5.24E-04	1.25E-02
GO:0006637	2	Biological Process	acyl-CoA metabolic process	5.24E-04	1.25E-02
GO:0035383	2	Biological Process	thioester metabolic process	5.24E-04	1.25E-02
GO:0044710	27	Biological Process	single-organism metabolic process	1.74E-03	3.68E-02

Supplementary Table 6. Counts of top 10% upregulated differentially expressed genes (DEGs) in antenna tissues between *H. cydno* and *H. melpomene* in the comparisons between *H. cydno* and *H. melpomene*, between *H. melpomene* and *H. charithonia* and between *H. cydno* and *H. charithonia*.

	<i>cydno</i> vs. <i>melpomene</i>			
	top 10% upregulated DEGs in <i>cydno</i> (all upregulated DEGs in <i>cydno</i>)	top 10% upregulated DEGs in <i>melpomene</i> (all upregulated DEGs in <i>melpomene</i>)	<i>charithonia</i> vs. <i>melpomene</i> ^a	<i>charithonia</i> vs. <i>cydno</i> ^b
pooled antennae	23 (224)	26 (260)	34	20
2-day-old female antennae	(1)	(3)	3	1
5-day-old female antennae	14 (135)	14 (134)	18	15
male antennae	1 (7)	2 (17)	2	1

^aDEGs in *charithonia* vs. *melpomene* overlap with those 10% upregulated DEGs between *H. cydno* and *H. melpomene*.

^bDEGs in *charithonia* vs. *cydno* overlap with those 10% upregulated DEGs between *H. cydno* and *H. melpomene*.

Supplementary Table 7. Top 10% upregulated differentially expressed genes (DEGs) in antenna tissues between *H. cydno* and *H. melpomene* in the comparisons between *H. cydno* and *H. melpomene*, between *H. melpomene* and *H. charithonia* and between *H. cydno* and *H. charithonia*.

Groups	Gene	Annotation
pooled antennae top 10% in <i>cydno</i>	HMEL033334g1.t1	endonuclease-reverse transcriptase HmRTE-e01
	HMEL030356g1.t1	hypothetical protein B5X24_HaOG206241
	HMEL034229g1.t1	Probable RNA-directed DNA polymerase from transposon BS
	HmelUGT42B3.mrna	UDP glycosyltransferase
	HMEL009425g1.t1	peptidoglycan-recognition protein LB-like
	HMEL034230g1.t1	hypothetical protein B5X24_HaOG202969, partial
	HMEL034753g1.t1	androgen-dependent TFPI-regulating protein-like
	HMEL035925g1.t1	uncharacterized protein LOC113402932
	HMEL016088g1.t1	spermine oxidase-like
	HMEL030967g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
	HMEL012792g1.t1	copper-transporting ATPase 1 isoform X1
	HMEL013052g1.t1	mitochondrial 2-oxoglutarate/malate carrier protein-like
	HmelGSTo7.mrna	glutathione S-transferase
	HMEL005705g1.t1	retinol dehydrogenase 11-like
	HMEL017341g1.t1	cuticle protein 7-like
	HMEL021874g1.t1	RAB6A-GEF complex partner protein 2
	HMEL021460g1.t1	nudC domain-containing protein 3
	HMEL031425g1.t1	reverse transcriptase
	HMEL022384g1.t1	retinol dehydrogenase 11-like
	HMEL010201g1.t1	uncharacterized protein LOC113395223 isoform X1
HMEL036992g1.t1	---NA---	
HMEL004124g2.t1	Transposable element Tcb2 transposase	
HMEL002147g1.t2	copper-transporting ATPase 1 isoform X1	
pooled antennae top 10% in <i>melpomene</i>	HMEL030226g1.t1	---NA---
	HMEL034567g1.t1	AGAP001623-PA-like protein
	HMEL033609g1.t1	---NA---
	HMEL008225g1.t1	copper-transporting ATPase 1 isoform X1
	HMEL036170g1.t1	---NA---
	HmOBP15	Odorant-binding protein
	HMEL035448g1.t1	---NA---
	HMEL033514g1.t1	uncharacterized protein LOC116776760
	HMEL033207g1.t1	RNAi efficiency-related nuclease REase
	HMEL011741g1.t1	Uncharacterized protein OBRU01_06617
	HMEL031443g1.t1	myrosinase 1-like
	HMEL003479g2.t1	---NA---

	HMEL032361g1.t1	endonuclease-reverse transcriptase
	HMEL030869g1.t1	---NA---
	HMEL030560g1.t2	---NA---
	HMEL004480g1.t1	high affinity copper uptake protein 1-like
	HMEL035802g1.t1	---NA---
	HMEL015074g1.t1	unnamed protein product
	HMEL015932g1.t1	uncharacterized protein LOC113399715
	HMEL030560g1.t1	---NA---
	HMEL022555-RA	UDP-glucuronosyltransferase-like
	HMEL033604g1.t1	---NA---
	HMEL034176g1.t1	PREDICTED: uncharacterized protein K02A2.6-like isoform X1
	HMEL034101g1.t1	uncharacterized protein K02A2.6-like isoform X1
	HMEL010631g1.t1	Protein abnormal spindle
	HMEL031741g1.t1	---NA---
2-day-old female antennae top 10% in <i>cydno</i>	HMEL008111g1.t1	putative dsRNase
2-day-old female antennae top 10% in <i>melpomene</i>	HMEL035833g1.t1	Outer dense fiber protein 3-like protein 2
	HMEL013050g1.t1	protein NDRG3 isoform X1
	HMEL005302g1.t2	tryptophan--tRNA ligase, mitochondrial
5-day-old female antennae top 10% in <i>cydno</i>	HMEL021874g1.t1	RAB6A-GEF complex partner protein 2
	HMEL012792g1.t1	copper-transporting ATPase 1 isoform X1
	HMEL032516g1.t1	---NA---
	HMEL034229g1.t1	Probable RNA-directed DNA polymerase from transposon BS
	HMEL032637g1.t1	hypothetical protein B5V51_2590
	HmelGSTs10.mrna	glutathione S-transferase
	HMEL011715g1.t1	---NA---
	HMEL014410g1.t1	uncharacterized protein LOC113400617
	HMEL034230g1.t1	hypothetical protein B5X24_HaOG202969, partial
	HMEL005705g1.t1	retinol dehydrogenase 11-like
	HMEL018077g1.t1	aspartic and glutamic acid-rich protein-like isoform X2

	HMEL016088g1.t1	spermine oxidase-like
	HMEL038045g1.t1	integumentary mucin C.1
	HMEL013052g1.t1	mitochondrial 2-oxoglutarate/malate carrier protein-like
5-day-old female antennae top 10% in <i>melpomene</i>	HMEL022659-RA	UDP-glucuronosyltransferase 2B2-like
	HMEL035448g1.t1	---NA---
	HMEL010004g1.t1	uncharacterized protein LOC113395234
	HMEL011740g1.t1	zinc finger CCHC domain-containing protein 24-like
	HMEL005392g2.t1	RNA exonuclease 4
	HMEL004480g1.t1	high affinity copper uptake protein 1-like
	HMEL030226g1.t1	---NA---
	HMEL034176g1.t1	PREDICTED: uncharacterized protein K02A2.6-like isoform X1
	HMEL033207g1.t1	RNAi efficiency-related nuclease Rease
	HMEL034101g1.t1	uncharacterized protein K02A2.6-like isoform X1
	HMEL035802g1.t1	---NA---
	HMEL010631g1.t1	Protein abnormal spindle
	HmelUGT33X1.mrna	UDP glycosyltransferase
	HMEL015074g1.t1	unnamed protein product
male antennae top 10% in <i>cydno</i>	HMEL033323g1.t1	alpha-tocopherol transfer protein-like
male antennae top 10% in <i>melpomene</i>	HMEL015074g1.t1	unnamed protein product
	HmelGSTe2.mrna	glutathione S-transferase

Note: Yellow font indicates DEGs between *H. charithonia* and *H. melpomene*. Blue font indicates DEGs between *H. charithonia* and *H. cydno*. Green font indicates overlap between yellow font and blue font.

Supplementary Table 8. Gene annotation of upregulated genes when comparing five-day-old and two-day-old female antenna, leg, and mouthpart tissues in *H. cydno*.

Upregulated genes in antennae of <i>H. cydno</i> two-day-old females	
ID	Annotation
HMEL002715g1.t1	4-hydroxyphenylpyruvate dioxygenase-like
HMEL013909g1.t1	cuticular protein CPH
HMEL013199g1.t2	phosphoenolpyruvate carboxykinase [GTP]-like isoform X2
HmOBP42	olfactory binding protein
HMEL007986g1.t1	pupal cuticle protein PCP52-like
HMEL037613g1.t1	cuticular protein CPH
HMEL037611g1.t1	putative cuticle protein
HMEL003429g1.t1	homogentisate 1,2-dioxygenase
HMEL003671g1.t1	putative cuticle protein
HMEL013908g1.t1	cuticular protein CPH
HMEL003670g1.t1	pupal cuticle protein G1A-like
HMEL011699g1.t1	uncharacterized protein LOC113394755
HMEL013974g1.t1	Phage tape measure minor tail protein
HMEL012441g1.t1	tyrosine aminotransferase
HMEL003910g1.t1	hyphal wall protein 2-like
HMEL006214g1.t1	flocculation protein FLO11 isoform X1
HMEL017435g2.t1	retinol dehydrogenase 13-like
HMEL015861g1.t1	pupal cuticle protein PCP52-like
HMEL007151g1.t2	tropomyosin-2 isoform X8
HMEL021853g1.t1	---NA---
HMEL011066g2.t1	alpha-tocopherol transfer protein-like
HMEL020600g1.t1	putative cuticle protein
HMEL016247g1.t1	eukaryotic translation initiation factor 4E-binding protein 2
HMEL017701g1.t1	cuticular protein SICPAP1-A
HMEL005816g1.t1	uncharacterized protein LOC117987429 isoform X2
HMEL007613-RA	general odorant-binding protein 56a-like
HmOBP31	olfactory binding protein
HMEL038072g1.t1	putative serine carboxypeptidase CPVL
HMEL002519g1.t1	succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial
HMEL007153g2.t1	fructose-1,6-bisphosphatase 1
HMEL014104g1.t1	uncharacterized protein LOC113401956 isoform X5
HMEL034177g1.t1	circadian clock-controlled protein-like
HMEL013908g2.t1	cuticular protein CPH
HMEL037608g1.t1	cuticle protein LPCP-23-like
HMEL010460g1.t1	glucose dehydrogenase [FAD, quinone]-like
HMEL014363g1.t2	zinc finger CCCH domain-containing protein 13 isoform X1
HMEL031781g1.t2	four and a half LIM domains protein 2 isoform X5
HMEL032062g1.t1	basic proline-rich protein isoform X1
HMEL030892g1.t1	seroin transcript 3
HMEL031805g1.t1	facilitated trehalose transporter Tret1-like isoform X1

HMEL036377g1.t1	synaptic vesicle glycoprotein 2B-like
HMEL037738g1.t1	uncharacterized LOC106121242
HMEL013202g1.t1	WAP, Kazal, immunoglobulin, Kunitz and NTR domain-containing protein
HMEL013231g1.t1	---NA---
HMEL007137g1.t1	seminal fluid protein HACP036
HMEL011396g1.t1	uricase
HMEL003322g1.t1	C-type lectin
HMEL005056g1.t1	phosphoglycolate phosphatase 1B, chloroplastic-like
HmelUGT40W2.mrna	UGT
HMEL009840g1.t1	organic cation transporter protein-like
HMEL007136g1.t1	cuticle protein 1-like
HMEL038071g1.t1	PREDICTED: uncharacterized protein LOC106721535
HMEL032309g1.t1	esterase FE4-like
HMEL014879g1.t1	DNA-binding protein Ets97D isoform X1
HmCSP7	chemosensory protein
HMEL002923g1.t1	uncharacterized protein LOC113401355 isoform X1
HMEL030675g1.t1	chymotrypsin-like elastase family member 2A
HMEL010199g1.t2	ubiquitin-conjugating enzyme E2 G1
HMEL033041g1.t1	C-type lectin 27kD
HMEL036512g1.t1	organic cation transporter protein-like
HMEL010483g1.t1	protein lethal(2)essential for life-like
HMEL016381g1.t1	uncharacterized protein LOC113392853
HMEL032310g1.t1	esterase FE4-like
HMEL037738g1.t2	uncharacterized LOC106121242
HMEL009383g1.t1	cysteine-rich venom protein TEL1-like
HMEL031897g1.t2	pancreatic triacylglycerol lipase-like isoform X1
HMEL007743g1.t1	dihydropyrimidine dehydrogenase [NADP(+)]
HMEL009754g1.t1	hexokinase type 2 isoform X1
HMEL034483g1.t1	uncharacterized threonine-rich GPI-anchored glycoprotein PJ4664.02-like
HMEL003114-RA	ejaculatory bulb-specific protein 3-like
HMEL004916g1.t1	neuropathy target esterase sws isoform X3
HMEL037733g1.t1	retinol dehydrogenase 11-like
HMEL010010g1.t1	ecdysone-induced protein 74EF isoform X1
HMEL015321g1.t1	phosphoserine phosphatase isoform X1
HMEL013360-RA	protein spaetzle 5
HMEL009297g1.t1	skin secretory protein xP2-like4
HMEL004916g3.t1	neuropathy target esterase sws isoform X2
HMEL003998g1.t1	calcium-binding protein P-like
HMEL002369g1.t1	nose resistant to fluoxetine protein 6-like
HMEL037732g1.t1	retinol dehydrogenase 11-like
HMEL021174g1.t1	zinc finger BED domain-containing protein 5-like
HMEL014508g1.t1	putative lipase;Gene=RR48_12383

HMEL021432g1.t1	Secreted protein member of chemokine factor super family
HMEL034424g1.t1	facilitated trehalose transporter Tret1-2 homolog
HMEL007377g1.t1	immune-related Hdd1
HMEL004593g2.t2	trehalase-like isoform X1
HMEL002971g2.t1	calpain-A-like isoform X2
HMEL010633g1.t1	alpha-tocopherol transfer protein-like
HMEL010636g1.t1	alpha-tocopherol transfer protein-like
HMEL006799g1.t1	protein 60A
HMEL036491g1.t1	tropomyosin-2 isoform X20
HMEL032512g1.t1	UDP-glucose 4-epimerase-like
HMEL032925g1.t1	probable cytochrome P450 9f2
HMEL013037g2.t1	membrane-bound alkaline phosphatase-like
HMEL032795g1.t1	uncharacterized protein LOC113394989 isoform X1
HMEL030102g1.t1	ommochrome-binding protein-like
HMEL003074g1.t1	global transcription regulator sge1
HMEL015031g1.t1	putative fatty acyl-CoA reductase CG5065
HMEL032463g1.t1	thrombospondin type-1 domain-containing protein 4-like
HMEL004097g1.t1	ras-related and estrogen-regulated growth inhibitor-like protein
HMEL036448g1.t1	hypothetical protein evm_006714
HMEL037703g1.t1	putative NUF1
HMEL003666g3.t1	---NA---
HMEL031464g1.t1	pancreatic triacylglycerol lipase-like
HMEL002880g1.t1	lysozyme-like
HMEL009855g1.t1	inducible metalloproteinase inhibitor protein-like
HMEL017996g1.t1	27 kDa hemolymph protein-like
HMEL021388g1.t1	anther-specific proline-rich protein APG
HMEL034199g1.t1	regucalcin-like
HMEL030401g1.t1	uncharacterized protein LOC113401782 isoform X1
HMEL033459g1.t1	zinc finger DNA binding protein
HMEL015271g1.t1	retinol dehydrogenase 13-like
HMEL010103g1.t1	transcription cofactor vestigial-like protein 4 isoform X2
HmCSP25	chemosensory protein
HMEL004510g1.t1	cuticle protein 3-like
HMEL031257g1.t1	ecdysone-induced protein 74EF isoform X3
HMEL015230g1.t1	seminal fluid protein CSSFP066
HMEL036398g1.t1	furin-like protease 1 isoform X1
HMEL010976g1.t1	pollen-specific leucine-rich repeat extensin-like protein 1
HMEL033281g1.t1	pickpocket protein 28-like
HMEL031829g1.t1	isovaleryl-CoA dehydrogenase, mitochondrial
HMEL034786g1.t1	DDB1- and CUL4-associated factor 13
HMEL004514g1.t1	uncharacterized protein LOC113393602 isoform X1
HMEL014952g1.t1	flocculation protein FLO11-like
HMEL010273g2.t1	putative dde superfamily endonuclease
HMEL033890g1.t1	reverse transcriptase

HMEL006811g2.t1	chitin deacetylase 1
HMEL009312g1.t1	protein Im not dead yet
HMEL015566g1.t1	dystroglycan isoform X1
HMEL004347g1.t1	katanin p60 ATPase-containing subunit A1-like isoform X1
HMEL009008g1.t1	myrosinase 1-like

Upregulated genes in antennae of *H. cydno* five-day-old females

ID	Annotation
HMEL014236g1.t1	complement factor I-like
HMEL008354g1.t1	NAD kinase-like isoform X2
HMEL017000g1.t1	peroxidase-like isoform X3
HMEL004406g3.t1	protein sprint isoform X1
HMEL008484g1.t1	---NA---
HMEL017600g1.t1	regucalcin-like
HMEL010959g1.t1	major facilitator superfamily domain-containing protein 6
HMEL033919g1.t1	venom dipeptidyl peptidase 4-like isoform X1
HMEL037697g1.t2	E3 ubiquitin-protein ligase MARCH6
HMEL016763g1.t1	putative carbonic anhydrase 3
HMEL021033g2.t1	androgen-induced gene 1 protein-like
HMEL008064g1.t1	protein yellow-like
HMEL003562g1.t1	phosphorylase b kinase gamma catalytic chain, skeletal muscle/heart isoform isoform X1
HMEL002874g1.t1	lysozyme-like isoform X1
HMEL010437g1.t1	protein tramtrack, beta isoform-like isoform X2
HMEL002127g1.t1	apyrase-like
HMEL010779g1.t1	chymotrypsin-like elastase family member 2A
HMEL020420g1.t1	unnamed protein product
HMEL037137g1.t1	nimrod B precursor
HMEL003683g1.t1	serine protease snake-like
HMEL002401g1.t1	Krueppel-like factor 10
HMEL022460g1.t1	HmCSP16 chemosensory protein
HMEL017524g1.t2	peroxisomal multifunctional enzyme type 2
HMEL008762g1.t4	pyruvate carboxylase, mitochondrial isoform X1
HMEL012223g1.t1	multidrug resistance-associated protein 1 isoform X1
HMEL014920g1.t1	glutamine synthetase 2 cytoplasmic
HMEL017504g1.t1	uncharacterized protein LOC113402575
HMEL036946g1.t1	elongation of very long chain fatty acids protein AAEL008004-like
HMEL003257g1.t1	5-aminolevulinate synthase, nonspecific, mitochondrial
HMEL014452g1.t4	juvenile hormone epoxide hydrolase-like
HMEL008774g1.t1	annexin B9 isoform X1
HMEL004112g1.t1	probable medium-chain specific acyl-CoA dehydrogenase, mitochondrial isoform X2
HMEL033570g1.t1	probable sodium-coupled neutral amino acid transporter 6
HMEL014623g1.t1	uncharacterized protein LOC112048164 isoform X2
	protein transport protein Sec61 subunit alpha

HMEL021304g1.t1	monocarboxylate transporter 14-like
HMEL016262g1.t1	inositol-3-phosphate synthase
HMEL036190g1.t1	carboxylesterase 3
HMEL005773g1.t1	pollen-specific leucine-rich repeat extensin-like protein 1
HMEL012250g1.t1	uncharacterized oxidoreductase TM_0325-like
HMEL022178g1.t1	---NA---
HMEL036689g1.t1	fatty-acid amide hydrolase 2-B
HMEL014238g1.t1	zinc finger protein 608-like isoform X1
HMEL012366g1.t1	uncharacterized protein LOC113394873
HMEL034838g1.t1	stearoyl-CoA desaturase 5-like isoform X2
HMEL031638g1.t1	Phosphonates-binding periplasmic protein
HmOBP38	olfactory binding protein
HMEL014247-RA	scavenger receptor class B member 1 isoform X2
HMEL002148g1.t1	blastula protease 10-like isoform X2
HMEL010629g1.t1	aldo-keto reductase AKR2E4-like
HMEL035990g1.t1	Transposase-like protein
HMEL033940g1.t1	membrane-associated progesterone receptor component 1-like
HMEL006560g1.t1	kynurenine formamidase isoform X2
HMEL021269g1.t1	protein white
HMEL014864g1.t1	facilitated trehalose transporter Tret1-2 homolog isoform X2
HMEL013405g1.t1	sodium/potassium/calcium exchanger 4-like
HMEL006748g1.t1	odorant binding protein
HMEL035316g1.t1	fasciclin-3 isoform X2
HMEL017092g1.t1	esterase B1-like
HMEL014309g1.t1	23 kDa integral membrane protein-like
HMEL010062g1.t1	potassium channel subfamily K member 1-like isoform X1
HMEL010126g1.t4	seminal fluid protein HACP059
HMEL016825g1.t1	facilitated trehalose transporter Tret1-like
HMEL006174g2.t1	uncharacterized protein LOC113402709
HMEL011017g1.t1	amino acid transporter AVT1D-like
HMEL020654g1.t1	sphingolipid delta(4)-desaturase DES1
HMEL032250g1.t1	uncharacterized protein LOC112055290
HMEL012362g1.t1	post-GPI attachment to proteins factor 6
HMEL004426g1.t1	pyridoxal phosphate phosphatase PHOSPHO2-like
HMEL017506g1.t1	elongation of very long chain fatty acids protein AAEL008004-like isoform X1
HMEL006304g1.t2	purine nucleoside phosphorylase-like isoform X2
HMEL006827g1.t2	transcriptional regulator ovo-like isoform X2
HMEL005408g2.t2	elongation of very long chain fatty acids protein AAEL008004 isoform X2
HMEL016700g1.t1	circadian clock-controlled protein-like
HMEL010310g2.t1	hypothetical protein KGM_213858A, partial
HMEL036816g1.t2	NPC intracellular cholesterol transporter 1 isoform X3
HMEL008599g1.t1	clavesin-1-like isoform X2

HMEL036015g1.t1	glucose transporter type 1-like isoform X2	
HMEL031498g1.t1	cationic amino acid transporter 2-like	
HMEL015932g1.t1	uncharacterized protein LOC113399715	
HMEL006853g1.t1	alpha-tocopherol transfer protein-like	
HMEL014796g1.t1	Group 3 secretory phospholipase A2	
HMEL033015g1.t1	glycerophosphocholine phosphodiesterase GPCPD1 isoform X1	
HMEL002238g1.t1	protein white	
HMEL033177g1.t1	hypothetical protein B5X24_HaOG203370	
HMEL034406g1.t1	circadian clock-controlled protein-like	
HMEL005285g2.t1	trace amine-associated receptor 1	
HMEL010126g1.t1	seminal fluid protein HACP059	
HMEL013185g1.t1	facilitated trehalose transporter Tret1-like	
HMEL038146g1.t1	protein PF14_0175-like	
HMEL002238g3.t1	protein white	
HMEL012124g1.t1	allantoinase-like	
HMEL030903g1.t1	RNA-directed DNA polymerase from mobile element jockey-like	
HMEL013136g4.t1	myrosinase 1-like	
HMEL011728g1.t1	glycerophosphodiester phosphodiesterase GDPD6-like	
HMEL012832g2.t1	long-chain fatty acid transport protein 4-like	
HMEL015572g1.t1	saccharopine dehydrogenase-like oxidoreductase	
HMEL030964g1.t1	---NA---	
HMEL006560g2.t1	kynurenine formamidase isoform X2	
HMEL009710g1.t1	alpha-tocopherol transfer protein-like	
HMEL004160g1.t3	aldehyde dehydrogenase, dimeric NADP-preferring isoform X1	
HMEL010737g1.t2	lysosomal alpha-mannosidase-like isoform X2	
HMEL031991g1.t1	cytochrome P450 4c3-like	
HMEL007637g1.t1	ecdysteroid-regulated 16 kDa protein-like	
HMEL017153-RA	cytochrome P450 6B5-like	
HMEL014628g1.t1	alpha-tocopherol transfer protein-like	
HMEL036736g1.t1	estradiol 17-beta-dehydrogenase 11-like	
HMEL002271g1.t1	hypothetical protein KGM_209237	
HMEL035405g1.t1	scavenger receptor class B member 1	
HMEL002834g1.t1	hypothetical protein B5V51_2590	
HMEL005093g1.t2	presenilin-1 isoform X1	
HMEL009558g3.t1	alpha-1,6-mannosyl-glycoprotein	2-beta-N-
	acetylglucosaminyltransferase isoform X1	
HMEL007474g1.t1	facilitated trehalose transporter Tret1-like	
HMEL014492g1.t1	phospholipase A1-like	
HMEL011026g1.t1	protein cycle isoform X2	
HMEL017464-RA	cytochrome P450 6k1-like	
HMEL006217g1.t1	cocoonase 4	
HMEL009054g1.t1	---NA---	
HMEL016204g1.t1	delta-1-pyrroline-5-carboxylate synthase isoform X1	
HMEL006577g1.t1	organic solute transporter alpha-like protein	

HMEL010190g2.t1	glucose dehydrogenase [FAD, quinone]
HMEL002147g1.t1	copper-transporting ATPase 1 isoform X4
HMEL016273g1.t2	espin isoform X1
HMEL008385g1.t1	A disintegrin and metalloproteinase with thrombospondin motifs 7
HMEL035250g1.t1	CD63 antigen-like
HMEL006997g1.t1	esterase FE4-like
HMEL015404g1.t1	la1-like protein 15 isoform X4
HMEL013064g1.t1	serine protease snake-like
HMEL005408g2.t1	elongation of very long chain fatty acids protein AAEL008004-like isoform X1
HmOBP50	olfactory binding protein
HMEL010294g2.t1	protein charybde-like
HMEL015010g2.t1	phosphatidylinositol-binding clathrin assembly protein LAP isoform X1
HMEL016367g1.t1	uridine 5-monophosphate synthase-like
HMEL030922g1.t1	probable peroxisomal acyl-coenzyme A oxidase 1
HMEL014531g5.t1	uncharacterized protein LOC113392023
HMEL011919g1.t1	protein hairy
HMEL010190g3.t1	glucose dehydrogenase [FAD, quinone]
HMEL003531g1.t1	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase isoform X1
HMEL008412g1.t1	membrane alanyl aminopeptidase-like
HMEL017304g1.t1	seminal fluid protein HACP059
HMEL037395g1.t2	homeotic protein distal-less isoform X1
HMEL009081g1.t1	protein scarlet-like
HMEL020720g1.t1	cuticular protein RR-2 motif 125 precursor
HMEL005408g1.t1	---NA---
HMEL015808g1.t1	cuticle protein 19.8-like
HMEL008564g1.t2	peptide methionine sulfoxide reductase
HMEL008564g1.t1	peptide methionine sulfoxide reductase
HMEL013489g1.t1	putative inactive cysteine synthase 2
HMEL010990-RA	ejaculatory bulb-specific protein 3-like
HMEL006341-RA	scavenger receptor class B member 1-like isoform X1
HMEL021635g1.t1	FERM domain-containing protein 8
HMEL030086g1.t1	prostamide/prostaglandin F synthase-like isoform X1
HmCSP8	chemosensory protein
HMEL034237g1.t1	reverse transcriptase
HMEL032052g1.t1	cuticular protein RR-3 motif 148 precursor
HmelUGT40V2.mrna	UGT
HMEL010126g1.t2	seminal fluid protein HACP059
HMEL030995g1.t1	uncharacterized protein LOC116768575
HMEL008807g1.t1	tan protein
HMEL030595g1.t1	endonuclease-reverse transcriptase HmRTE-e01
HMEL006535g4.t1	trans-1,2-dihydrobenzene-1,2-diol dehydrogenase-like
HMEL008902g1.t1	PHD finger protein 14 isoform X1

HMEL011684g1.t1	uncharacterized protein LOC113404648
HMEL030029g1.t1	Probable RNA-directed DNA polymerase from transposon BS
HMEL002124g1.t1	fatty acid-binding protein, muscle-like
HMEL015278g1.t1	pancreatic triacylglycerol lipase-like
HMEL006217g2.t1	cocoonase 4
HMEL011384g2.t1	putative defense protein Hdd11
HMEL016237g1.t1	circadian clock-controlled protein-like
HMEL034861g1.t1	androgen-dependent TFPI-regulating protein-like
HMEL004850g2.t1	dopamine N-acetyltransferase-like
HMEL010126g1.t3	seminal fluid protein HACP059
HMEL017154-RA	cytochrome P450 6B2-like
HMEL004446g1.t1	uncharacterized protein LOC116768575
HMEL014225g1.t1	protein phosphatase 1 regulatory subunit 3C
HMEL034236g1.t1	reverse transcriptase
HMEL002003g1.t1	apolipoprotein D-like
HmelUGT33Z2.mrna	UGT
HMEL011873g2.t1	arylsulfatase B-like
HMEL013164g1.t1	facilitated trehalose transporter Tret1-like
HMEL033667g1.t1	xanthine dehydrogenase-like
HMEL011266g1.t1	nose resistant to fluoxetine protein 6-like
HMEL007905g1.t1	glycogen-binding subunit 76A isoform X1
HMEL016058g1.t1	seminal fluid protein HACP044
HMEL037992g1.t1	senecionine N-oxygenase-like
HMEL032516g1.t1	---NA---
HMEL036843g1.t1	chymotrypsin inhibitor
HMEL016688g1.t1	eye-specific diacylglycerol kinase isoform X1
HMEL015726g1.t1	stearoyl-CoA desaturase 5-like
HMEL032327g1.t1	beta-hexosaminidase subunit beta-like
HMEL032637g1.t1	hypothetical protein B5V51_2590
HMEL008541g1.t1	protein app1-like
HMEL013977g1.t1	---NA---
HMEL006784g1.t1	alpha,alpha-trehalose-phosphate synthase [UDP-forming]
HMEL009055g1.t1	---NA---
HMEL017149-RA	Cytochrome P450 4V2

Upregulated genes in legs of *H. cydno* two-day-old females

ID	Annotation
HMEL007986g1.t1	pupal cuticle protein PCP52-like
HMEL031927g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL002715g1.t1	4-hydroxyphenylpyruvate dioxygenase-like
HMEL013199g1.t2	phosphoenolpyruvate carboxykinase [GTP]-like isoform X2
HMEL009754g1.t3	hexokinase type 2 isoform X3
HMEL004242g1.t1	calcium-independent phospholipase A2-gamma-like
HMEL003429g1.t1	homogentisate 1,2-dioxygenase
HMEL003671g1.t1	putative cuticle protein

HMEL035722g1.t1	putative glycine-rich cell wall structural protein 1
HMEL010500g2.t1	---NA---
HMEL037613g1.t1	cuticular protein CPH
HMEL011939g1.t1	facilitated trehalose transporter Tret1-like
HMEL005934g1.t1	glutaminase liver isoform, mitochondrial isoform X1
HMEL006697g1.t3	phosphatidate phosphatase LPIN3 isoform X1
HmOBP31	olfactory binding protein
HMEL014926g2.t1	monocarboxylate transporter 3
HMEL004916g3.t4	neuropathy target esterase sws isoform X4
HMEL007613-RA	general odorant-binding protein 56a-like
HMEL030840g1.t1	facilitated trehalose transporter Tret1-like isoform X1
HMEL010735g1.t1	BCL2/adenovirus E1B 19 kDa protein-interacting protein 3 isoform X2
HMEL014094g1.t1	insulin-like receptor
HMEL037950g1.t1	RING finger protein 145
HMEL013908g1.t1	cuticular protein CPH
HMEL016141g1.t1	uncharacterized LOC106128526
HMEL032926g1.t1	senecionine N-oxygenase isoform X1
HMEL006697g2.t1	phosphatidate phosphatase LPIN3 isoform X1
HMEL012441g1.t1	tyrosine aminotransferase
HMEL012521g1.t1	troponin C-like
HMEL015321g1.t1	phosphoserine phosphatase isoform X1
HMEL016247g1.t1	eukaryotic translation initiation factor 4E-binding protein 2
HMEL007353g1.t2	troponin I isoform X15
HMEL004713g3.t1	methyltransferase-like protein 13
HMEL004412g1.t1	uncharacterized protein LOC113401620
HMEL003719g1.t1	larval cuticle protein LCP-22-like
HMEL020073g1.t1	adiponectin receptor protein
HMEL006214g1.t1	flocculation protein FLO11 isoform X1
HMEL031928g1.t1	endocuticle structural glycoprotein SgAbd-2-like
HMEL030210g1.t1	ras-related and estrogen-regulated growth inhibitor-like protein
HMEL002369g1.t1	nose resistant to fluoxetine protein 6-like
HMEL008353g1.t2	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1
HMEL003673g1.t2	collagen and calcium-binding EGF domain-containing protein 1-like isoform X1
HMEL032730g1.t1	insulin-like growth factor-binding protein complex acid labile subunit isoform X1
HMEL037738g1.t2	uncharacterized LOC106121242
HMEL014632g1.t1	endochitinase-like isoform X2
HMEL036512g1.t1	organic cation transporter protein-like
HMEL006576g1.t1	early endosome antigen 1
HMEL004916g1.t1	neuropathy target esterase sws isoform X3
HMEL013901g1.t1	3-phosphoinositide-dependent protein kinase 1 isoform X1

HMEL016094g1.t1	protein ABHD18
HMEL002519g1.t1	succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial
HMEL011355g1.t1	spindle pole body component 110 isoform X1
HMEL010106g1.t1	pancreatic lipase-related protein 2
HMEL013620g2.t1	Actin, muscle
HMEL011923g1.t1	nanos-like protein
HMEL003398g1.t2	irregular chiasm C-roughest protein-like isoform X1
HMEL013584g2.t1	leucine-rich repeat-containing protein 57 isoform X1
HMEL009569g1.t1	circadian clock-controlled protein-like
HMEL036108g1.t1	hypothetical protein KGM_210950
HMEL014363g1.t1	zinc finger CCCH domain-containing protein 13 isoform X1
HmCSP25	chemosensory protein
HMEL030467g1.t1	organic cation transporter protein-like
HMEL036535g1.t1	serine protease snake-like
HMEL004332g1.t1	putative Insulin receptor precursor
HMEL018081g1.t1	hyaluronidase PH-20-like isoform X1
HMEL016978g1.t1	Type I inositol-1,4,5-trisphosphate 5-phosphatase
HMEL006484g1.t1	ankyrin-3-like isoform X2
HMEL006799g1.t1	protein 60A
HMEL032058g1.t1	uncharacterized protein ZK1073.1 isoform X3
HMEL009312g1.t1	protein Im not dead yet
HMEL035053g1.t1	patched domain-containing protein 3
HMEL034424g1.t1	facilitated trehalose transporter Tret1-2 homolog
HMEL033041g1.t1	C-type lectin 27kD
HMEL010460g1.t1	glucose dehydrogenase [FAD, quinone]-like
HMEL014452g1.t3	annexin B9 isoform X4
HMEL015754g1.t1	versican core protein
HMEL009805g1.t1	uncharacterized protein LOC113404204, partial
HMEL005816g1.t1	uncharacterized protein LOC117987429 isoform X2
HMEL006583g1.t1	muscle-specific protein 20-like
HMEL011631g1.t1	homocysteine S-methyltransferase 2-like
HMEL012654g1.t1	mitochondrial genome maintenance exonuclease 1-like
HMEL013231g1.t1	---NA---
HMEL015094g1.t1	histone-lysine N-methyltransferase SMYD3
HMEL031931g1.t1	endocuticle structural glycoprotein SgAbd-2-like
HMEL003998g1.t1	calcium-binding protein P-like
HMEL035254g1.t2	paxillin isoform X1
HMEL034773g1.t2	Tyrosine-protein phosphatase non-receptor type 13
HMEL007743g1.t1	dihydropyrimidine dehydrogenase [NADP(+)]
HMEL017435g2.t1	retinol dehydrogenase 13-like
HMEL017044g1.t2	E3 ubiquitin-protein ligase HECW2 isoform X1
HMEL034512g1.t2	potassium voltage-gated channel protein Shal isoform X2
HMEL015971g1.t1	farnesoic acid O-methyltransferase
HMEL006035g1.t1	putative Multiple pdz domain protein

HMEL030671g1.t1	DNA gyrase subunit B
HMEL031058g1.t2	nuclear receptor coactivator 7 isoform X1
HMEL013304g1.t1	long-chain-fatty-acid--CoA ligase ACSBG2 isoform X2
HMEL014810g1.t1	titin-like isoform X1
HMEL012591g1.t1	protein yippee-like CG15309 isoform X1
HMEL008369g3.t1	probable serine/threonine-protein kinase dyrk2 isoform X2
HMEL013678g1.t3	potassium voltage-gated channel protein Shab isoform X1
HMEL009417g1.t1	pupal cuticle protein-like
HMEL037926g1.t1	hypoxia-inducible factor 1-alpha-like isoform X1
HMEL009312g4.t1	protein Im not dead yet
HMEL012438g1.t1	zinc transporter ZIP10
HMEL013400g1.t1	probable citrate synthase 2, mitochondrial
HMEL005241g1.t1	muscle-specific protein 20
HMEL008833g1.t1	alpha-actinin, sarcomeric isoform X1
HMEL030675g1.t1	chymotrypsin-like elastase family member 2A
HMEL035298g1.t1	ester hydrolase C11orf54 homolog isoform X1
HMEL021174g1.t1	zinc finger BED domain-containing protein 5-like
HMEL008727g1.t1	collagen alpha-1(IX) chain-like
HMEL013284g1.t1	probable malate dehydrogenase, mitochondrial
HMEL003247g1.t1	organic cation transporter protein-like
HMEL016266g1.t1	fumarylacetoacetase

Upregulated genes in legs of *H. cydno* five-day-old females

ID	Annotation
HMEL032548g1.t1	venom carboxylesterase-6-like
HMEL014881g1.t1	fatty acyl-CoA reductase wat-like
HmelUGT33G1.mrna	UGT
HMEL035444g1.t1	unnamed protein product
HMEL033769g1.t1	mitochondrial inner membrane protease subunit 1
HMEL014135g1.t1	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 5
HMEL011072g1.t1	alpha-tocopherol transfer protein-like
HMEL030356g1.t1	hypothetical protein B5X24_HaOG206241
HMEL035350g1.t1	serine protease snake-like
HMEL016015g4.t1	fatty-acid amide hydrolase 2-like
HMEL011426g1.t1	integrin beta pat-3-like
HMEL031991g1.t1	cytochrome P450 4c3-like
HMEL035405g1.t1	scavenger receptor class B member 1
HMEL031976g1.t1	39S ribosomal protein L55, mitochondrial
HMEL037150g1.t1	moesin/ezrin/radixin homolog 1 isoform X2
HMEL005384g1.t1	28S ribosomal protein S7, mitochondrial
HMEL016015g5.t1	fatty-acid amide hydrolase 2-like
HMEL013136g4.t1	myrosinase 1-like
HMEL030393g1.t1	uncharacterized protein LOC113401667, partial
HMEL013064g1.t1	serine protease snake-like
HMEL002271g1.t1	hypothetical protein KGM_209237

HMEL010864g1.t1	protein disulfide-isomerase
HMEL013596g1.t1	peptidyl-prolyl cis-trans isomerase FKBP2
HMEL008333g1.t1	ribosomal protein 63, mitochondrial
HMEL016015g1.t1	fatty-acid amide hydrolase 2-like
HMEL030995g1.t1	uncharacterized protein LOC116768575
HMEL003312g1.t3	inter-alpha-trypsin inhibitor heavy chain H4-like isoform X1
HMEL006935g1.t1	uncharacterized protein LOC113404389
HMEL014623g1.t1	protein transport protein Sec61 subunit alpha
HMEL008599g1.t1	clavesin-1-like isoform X2
HMEL011117g1.t1	Pre-mRNA-splicing factor 38
HMEL005408g1.t1	---NA---
HMEL003357g1.t1	Coiled-coil-helix-coiled-coil-helix domain-containing protein 1
HMEL030086g1.t1	prostamide/prostaglandin F synthase-like isoform X1
HMEL014845g1.t1	probable 28S ribosomal protein S6, mitochondrial
HMEL002378g1.t1	serine protease inhibitor dipetalogastin-like
HMEL034406g1.t1	circadian clock-controlled protein-like
HMEL017894g4.t1	cGMP-dependent protein kinase, isozyme 2 forms cD5/T2-like isoform X1
HMEL008459g1.t1	facilitated trehalose transporter Tret1-like
HMEL011873g2.t1	arylsulfatase B-like
HmOBP45	olfactory binding protein
HMEL034667g1.t1	cilia- and flagella-associated protein 206-like
HMEL013177g1.t1	probable small nuclear ribonucleoprotein Sm D2
HMEL021415g1.t1	endocuticle structural glycoprotein SgAbd-5-like
HMEL035167g1.t1	trafficking kinesin-binding protein milt isoform X4
HMEL037403g1.t1	phosphatidylinositol 4-phosphate 5-kinase type-1 gamma-like isoform X1
HMEL031755g1.t1	Probable RNA-directed DNA polymerase from transposon BS
HMEL037976g1.t1	probable G-protein coupled receptor Mth-like 3
HMEL037877g1.t2	papilin isoform X1
HMEL006746g1.t1	juvenile hormone binding protein an-0921 precursor
HMEL032137g1.t4	cleavage and polyadenylation specificity factor subunit CG7185 isoform X1
HMEL004809g1.t1	succinate dehydrogenase assembly factor 2-B, mitochondrial-like
HMEL031756g1.t1	putative endonuclease and reverse transcriptase-like protein
HMEL005922g1.t1	Major facilitator superfamily domain-containing protein 6-A
HMEL031902g1.t1	protein THEM6-like
HMEL031212g1.t1	tctex1 domain-containing protein 2-like
HMEL014850g1.t1	insulin-like growth factor isoform X3
HMEL031234g1.t2	RNA-binding protein 1 isoform X1
HMEL006610g1.t1	endoplasmin isoform X1
HMEL005973g1.t1	facilitated trehalose transporter Tret1-like
HMEL008354g2.t1	NAD kinase-like isoform X5
HMEL034210g1.t2	vacuolar protein sorting-associated protein 13A-like

HMEL014043g1.t1	39S ribosomal protein L18, mitochondrial
HMEL006876g1.t2	jmjC domain-containing histone demethylation protein 1 isoform X1
HMEL005882g2.t1	esterase E4-like
HMEL011226g1.t1	probable chitinase 2
HMEL034031g1.t1	---NA---
HMEL021853g1.t1	---NA---
HmelGSTe6.mrna	GST
HMEL037138g1.t1	---NA---
HMEL006546g1.t1	anaphase-promoting complex subunit 15B-like
HMEL008776g1.t1	3-hydroxyacyl-CoA dehydrogenase type-2
HMEL032659g1.t1	macrophage mannose receptor 1-like
HMEL033930g1.t3	tenascin-like isoform X1
HMEL006016g1.t1	endocuticle structural glycoprotein ABD-5-like
HMEL015235g1.t1	protein takeout
HMEL013783g1.t1	uncharacterized protein LOC113394807
HMEL030683g1.t1	active regulator of SIRT1-like
HMEL034781g1.t1	39S ribosomal protein L46, mitochondrial
HMEL030910g1.t1	apolipoprotein D-like
HMEL009055g1.t1	---NA---
HMEL032188g1.t1	hemicentin-1-like isoform X1
HMEL006992g1.t1	chromobox protein homolog 5-like
HMEL008603g1.t1	alpha-tocopherol transfer protein-like
HMEL005091g2.t1	adipocyte plasma membrane-associated protein-like
HMEL005879g1.t1	39S ribosomal protein L54, mitochondrial
HMEL005553-RA	cytochrome P450 4C1-like
HmelUGT33AA2.mrna	UGT
HMEL012878g2.t1	organic cation transporter protein-like
HMEL036519g1.t1	---NA---
HMEL009597g1.t1	seminal fluid protein HACP057
HMEL035972g1.t1	carboxypeptidase B-like
HMEL032052g1.t1	cuticular protein RR-3 motif 148 precursor
HMEL036246g1.t1	uncharacterized protein LOC113402398
HMEL016204g1.t1	delta-1-pyrroline-5-carboxylate synthase isoform X1
HMEL005227g1.t1	vesicle transport protein GOT1B
HMEL012617g2.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL003326g3.t1	esterase FE4-like
HMEL015313g1.t1	UNC93-like protein
HMEL018028g1.t1	high mobility group protein HMGI-C-like
HMEL021635g1.t1	FERM domain-containing protein 8
HMEL015861g1.t1	pupal cuticle protein PCP52-like
HMEL013325g2.t1	delta and Notch-like epidermal growth factor-related receptor isoform X1
HMEL016763g1.t1	putative carbonic anhydrase 3

HMEL033640g1.t1	probable 39S ribosomal protein L49, mitochondrial
HMEL005408g2.t1	elongation of very long chain fatty acids protein AAEL008004-like isoform X1
HMEL011325g1.t1	mucin-5AC-like
HMEL015963g1.t1	39S ribosomal protein L42, mitochondrial
HMEL003326g2.t1	esterase FE4-like
HMEL022269g1.t1	saccharopine dehydrogenase-like oxidoreductase
HMEL003819g1.t1	glyoxalase domain-containing protein 4
HMEL033327g1.t1	alpha-tocopherol transfer protein-like
HMEL011017g1.t1	amino acid transporter AVT1D-like
HMEL037992g1.t1	senecionine N-oxygenase-like
HMEL013171g1.t1	probable 28S ribosomal protein S25, mitochondrial
HMEL015999g1.t2	Ig-like and fibronectin type-III domain-containing protein 2 isoform X1
HMEL033982g1.t1	proton-coupled amino acid transporter-like protein pathetic
HMEL011032g1.t1	cubilin-like
HMEL005091g1.t1	adipocyte plasma membrane-associated protein-like
HMEL015087g1.t1	protein obstructor-E-like
HMEL006003g1.t1	putative cuticle protein
HMEL034236g1.t1	reverse transcriptase
HMEL009544g1.t1	SPARC
HMEL002119g1.t1	luciferin 4-monooxygenase-like
HmCSP16	chemosensory protein
HMEL004426g1.t1	pyridoxal phosphate phosphatase PHOSPHO2-like
HMEL034930g1.t1	28S ribosomal protein S21, mitochondrial
HMEL033930g1.t1	tenascin-like isoform X1
HMEL003683g1.t1	serine protease snake-like
HmOBP11	olfactory binding protein
HMEL007135g1.t1	---NA---
HMEL016318g1.t2	ankyrin-1-like isoform X2
HMEL037137g1.t1	nimrod B precursor
HMEL012656g1.t1	connectin-like
HMEL010349g1.t1	protein obstructor-E-like
HMEL006535g4.t1	trans-1,2-dihydrobenzene-1,2-diol dehydrogenase-like
HMEL021033g2.t1	androgen-induced gene 1 protein-like
HMEL012569g1.t1	integrin alpha-4-like
HMEL013013g1.t1	Gem-associated protein 7
HmOBP8	olfactory binding protein
HMEL003281g1.t1	uncharacterized protein LOC113397788
HMEL005900g1.t1	phospholipase ABHD3
HMEL011066g2.t1	alpha-tocopherol transfer protein-like
HMEL002899-RA	cuticular protein CPG24
HMEL035227g1.t1	15-hydroxyprostaglandin dehydrogenase [NAD(+)]-like
HMEL003599g1.t1	circadian clock-controlled protein-like

HMEL037953g1.t1	cystathionine beta-synthase-like
HMEL004478g1.t1	juvenile hormone esterase-like
HMEL015808g1.t1	cuticle protein 19.8-like
HMEL033034g1.t1	long-chain fatty acid transport protein 4-like
HMEL020720g1.t1	cuticular protein RR-2 motif 125 precursor
HMEL008058g1.t1	D-aspartate oxidase
HMEL034762g1.t1	Serine protease easter
HMEL013185g1.t1	facilitated trehalose transporter Tret1-like
HMEL016137g1.t2	ras-related protein Rab-31
HMEL011684g1.t1	uncharacterized protein LOC113404648
HMEL009954g1.t1	gamma-glutamyl hydrolase A-like isoform X1
HMEL011479g1.t1	venom carboxylesterase-6-like
HMEL015430g1.t2	homeobox protein extradenticle isoform X1
HMEL014531g4.t1	uncharacterized protein LOC113392023
HMEL012805g1.t2	prosaposin isoform X1
HMEL031326g1.t1	---NA---
HMEL009418g1.t1	glucose dehydrogenase [FAD, quinone]-like
HMEL036865g1.t1	protein msta-like isoform X1
HMEL030029g1.t1	Probable RNA-directed DNA polymerase from transposon BS
HMEL034237g1.t1	reverse transcriptase
HMEL003055g1.t1	small integral membrane protein 20
HMEL014120g4.t1	protein rolling stone-like
HMEL002092g1.t1	protein yellow-like isoform X1
HMEL008820g1.t1	D-3-phosphoglycerate dehydrogenase
HMEL002202g1.t1	extensin-like isoform X2
HMEL020420g1.t1	unnamed protein product
HMEL010201g2.t1	uncharacterized protein LOC113395223 isoform X1
HMEL016700g1.t1	circadian clock-controlled protein-like
HMEL032519g1.t1	---NA---
HMEL036015g1.t1	glucose transporter type 1-like isoform X2
HMEL017867g1.t1	solute carrier family 46 member 3-like
HMEL005413g1.t1	chitin deacetylase 4
HMEL017464-RA	cytochrome P450 6k1-like
HMEL013489g1.t1	putative inactive cysteine synthase 2
HMEL010228-RA	general odorant-binding protein 19d-like
HMEL011427g1.t1	integrin beta pat-3-like
HMEL014931g1.t1	serine protease inhibitor dipetalogastin-like
HMEL004430g1.t1	GILT-like protein 1 isoform X2
HMEL005109g1.t1	cadherin-23
HMEL006748g1.t1	odorant binding protein
HMEL015572g1.t1	saccharopine dehydrogenase-like oxidoreductase
HMEL017304g1.t1	seminal fluid protein HACP059
HMEL011561g1.t1	uncharacterized LOC106109504 precursor
HMEL002783g1.t1	class E vacuolar protein-sorting machinery protein HSE1-like

HMEL011427g2.t1	integrin beta pat-3-like
HMEL004857g1.t1	uncharacterized protein LOC113398135
HMEL003320g1.t2	mediator of RNA polymerase II transcription subunit 12-like isoform X2
HMEL032520g1.t1	---NA---
HMEL013037g1.t1	membrane-bound alkaline phosphatase-like isoform X1
HmOBP47	olfactory binding protein
HMEL037131g1.t2	angiotensin-converting enzyme-like isoform X3
HMEL036374g1.t1	uncharacterized protein LOC112045565 isoform X1
HMEL002124g1.t1	fatty acid-binding protein, muscle-like
HMEL022206g1.t1	proton-coupled amino acid transporter-like protein pathetic
HMEL022269g2.t1	saccharopine dehydrogenase-like oxidoreductase
HMEL030967g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL031425g1.t1	reverse transcriptase
HMEL006744g1.t1	circadian clock-controlled protein-like
HMEL013158g1.t1	facilitated trehalose transporter Tret1-like
HMEL036190g1.t1	carboxylesterase 3
HMEL016028g1.t1	mitochondrial import receptor subunit TOM40 homolog
HMEL012038g1.t1	glycine-rich protein DOT1-like
HMEL004850g2.t1	dopamine N-acetyltransferase-like
HMEL014628g1.t1	alpha-tocopherol transfer protein-like
HMEL014452g2.t2	ATP-binding cassette sub-family E member 1
HMEL014783g1.t1	circadian clock-controlled protein-like
HMEL035982g1.t1	peroxidase-like
HMEL011266g1.t1	nose resistant to fluoxetine protein 6-like
HMEL020648g1.t1	carbonic anhydrase-related protein 10 isoform X2
HMEL006379g1.t1	Neuronal pentraxin-2
HMEL031826g1.t1	protein FAM13A-like isoform X2
HMEL010348g1.t1	protein obstructor-E-like
HMEL032434g1.t1	hypothetical protein KGM_208333
HMEL011374g1.t1	venom acid phosphatase Acph-1-like
HMEL022306g3.t1	geranylgeranyl pyrophosphate synthase-like
HMEL009950g1.t1	---NA---
HMEL016024g1.t1	lysozyme 2-like
HMEL014519-RA	sensory neuron membrane protein 2
HMEL008564g1.t2	peptide methionine sulfoxide reductase
HMEL008564g1.t1	peptide methionine sulfoxide reductase
HMEL035981g1.t1	peroxidase-like
HMEL036843g1.t1	chymotrypsin inhibitor
HMEL032327g1.t1	beta-hexosaminidase subunit beta-like
HMEL016262g1.t1	inositol-3-phosphate synthase
HMEL004446g1.t1	uncharacterized protein LOC116768575
HMEL009951g1.t1	---NA---

HMEL014492g1.t1	phospholipase A1-like
HMEL010126g1.t1	seminal fluid protein HACP059
HMEL010062g1.t1	potassium channel subfamily K member 1-like isoform X1
HMEL032637g1.t1	hypothetical protein B5V51_2590
HMEL008541g1.t1	protein app1-like
HMEL003225g1.t1	alpha-tocopherol transfer protein-like
HMEL010126g1.t3	seminal fluid protein HACP059
HMEL003479g2.t1	---NA---
HMEL015278g1.t1	pancreatic triacylglycerol lipase-like
HMEL033323g1.t1	alpha-tocopherol transfer protein-like
HMEL006576g1.t2	early endosome antigen 1
HMEL030103g1.t1	ommochrome-binding protein-like
HMEL011196g1.t1	cuticle protein 1-like
HMEL017149-RA	Cytochrome P450 4V2
HmCSP14	chemosensory protein
HMEL014782g1.t1	protein takeout-like
HmOBP50	olfactory binding protein
HMEL011197g2.t1	cuticle protein 1-like
HMEL011197g1.t1	cuticle protein 1

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ID	Annotation
HMEL006020g1.t1	protein lethal(3)malignant blood neoplasm 1
HMEL031924g1.t1	endocuticle structural glycoprotein SgAbd-8-like
HMEL011701g1.t1	cuticle protein 16.5-like
HmGr56	gustatory receptor
HMEL031927g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL002715g1.t1	4-hydroxyphenylpyruvate dioxygenase-like
HMEL007986g1.t1	pupal cuticle protein PCP52-like
HMEL007003g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL011699g1.t1	uncharacterized protein LOC113394755
HMEL011805g1.t1	---NA---
HMEL003671g1.t1	putative cuticle protein
HMEL036644g1.t2	---NA---
HMEL004412g1.t1	uncharacterized protein LOC113401620
HMEL012521g1.t1	troponin C-like
HMEL015745g1.t1	organic cation transporter protein-like isoform X1
HMEL036644g1.t1	---NA---
HmOBP31	olfactory binding protein
HMEL005422g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL002722g1.t1	glycine-rich cell wall structural protein
HMEL030106g1.t1	cuticle protein 7-like
HMEL003719g1.t1	larval cuticle protein LCP-22-like
HMEL010460g1.t1	glucose dehydrogenase [FAD, quinone]-like
HMEL036512g1.t1	organic cation transporter protein-like

HMEL012523g1.t1	troponin C-like
HMEL007613-RA	general odorant-binding protein 56a-like
HMEL006733g4.t1	cuticular protein hypothetical 12 precursor
HMEL031921g1.t1	larval cuticle protein 1-like
HMEL003429g1.t1	homogentisate 1,2-dioxygenase
HMEL003835g1.t1	endocuticle structural glycoprotein SgAbd-1-like
HMEL006017g2.t1	flexible cuticle protein 12-like
HMEL002369g1.t1	nose resistant to fluoxetine protein 6-like
HMEL004242g1.t1	calcium-independent phospholipase A2-gamma-like
HMEL003670g1.t1	pupal cuticle protein G1A-like
HMEL007353g1.t1	troponin I isoform X10
HMEL011924g1.t1	uncharacterized protein LOC114362364
HmCSP25	chemosensory protein
HMEL037613g1.t1	cuticular protein CPH
HMEL037601g1.t1	---NA---
HMEL014926g2.t1	monocarboxylate transporter 3
HMEL037996g1.t1	nose resistant to fluoxetine protein 6-like
HMEL016976g1.t1	mycosubtilin synthase subunit C
HMEL021853g1.t1	---NA---
HMEL032926g1.t1	senecionine N-oxygenase isoform X1
HMEL007137g1.t1	seminal fluid protein HACP036
HMEL006689g1.t1	myrosinase 1-like
HMEL007002g1.t1	larval cuticle protein 1-like
HMEL002505g1.t2	inactive dipeptidyl peptidase 10
HMEL007536g1.t1	uncharacterized peptidase C1-like protein F26E4.3
HMEL031928g1.t1	endocuticle structural glycoprotein SgAbd-2-like
HMEL009297g1.t1	skin secretory protein xP2-like
HMEL021221g1.t1	yellow-c
HMEL021483g2.t1	---NA---
HMEL010636g1.t1	alpha-tocopherol transfer protein-like
HMEL031931g1.t1	endocuticle structural glycoprotein SgAbd-2-like
HMEL017127g1.t1	myosin heavy chain, muscle isoform X19
HMEL004893g1.t1	adhesive plaque matrix protein-like isoform X1
HMEL002552g1.t1	cuticle protein CP14.6-like
HMEL002717g1.t1	4-hydroxyphenylpyruvate dioxygenase-like
HMEL014555g1.t1	monocarboxylate transporter 10-like isoform X1
HMEL037608g1.t1	cuticle protein LPCP-23-like
HMEL002569g1.t1	monocarboxylate transporter 10-like isoform X2
HMEL008949g1.t1	cytochrome c
HMEL010483g1.t1	protein lethal(2)essential for life-like
HMEL030675g1.t1	chymotrypsin-like elastase family member 2A
HMEL022179g1.t1	peroxisomal membrane protein PEX13-like
HMEL034288g1.t1	circadian clock-controlled protein-like
HMEL006533g1.t1	mitochondrial enolase superfamily member 1-like

HMEL002519g1.t1	succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial
HMEL007354g1.t1	twitchin isoform X2
HMEL033085g1.t1	Signal peptide, CUB and EGF-like domain-containing protein 2
HMEL017192g1.t1	SET domain-containing protein SmydA-8-like isoform X1
HMEL022129g1.t1	uncharacterized protein LOC113394950
HMEL008353g1.t1	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1
HMEL010106g1.t1	pancreatic lipase-related protein 2
HMEL003662g1.t1	---NA---
HMEL033509g1.t1	serine proteinase stubble
HMEL003673g1.t2	collagen and calcium-binding EGF domain-containing protein 1-like isoform X1
HMEL010010g1.t1	ecdysone-induced protein 74EF isoform X1
HMEL008353g1.t2	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1
HMEL016247g1.t1	eukaryotic translation initiation factor 4E-binding protein 2
HMEL012251g1.t1	uncharacterized protein LOC117991081
HMEL013901g1.t1	3-phosphoinositide-dependent protein kinase 1 isoform X1
HMEL014094g1.t1	insulin-like receptor
HMEL030840g1.t1	facilitated trehalose transporter Tret1-like isoform X1
HMEL037738g1.t2	uncharacterized LOC106121242
HMEL030866g1.t1	myrosinase 1-like
HMEL033281g1.t1	pickpocket protein 28-like
HMEL006811g1.t1	chitin deacetylase 2
HMEL008859g1.t1	calcium-binding protein P-like
HMEL034424g1.t1	facilitated trehalose transporter Tret1-2 homolog
HMEL011299g1.t2	uncharacterized protein LOC117994014 isoform X2
HMEL011227g1.t1	cuticular protein analogous to peritrophins 1-D precursor
HMEL005056g1.t1	phosphoglycolate phosphatase 1B, chloroplastic-like
HMEL014632g1.t1	endochitinase-like isoform X2
HMEL015321g1.t1	phosphoserine phosphatase isoform X1
HMEL031933g1.t1	endocuticle structural glycoprotein ABD-5-like
HMEL012299g1.t1	troponin C-like isoform X1
HMEL016408g1.t1	C-type lectin 4 precursor
HMEL030671g1.t1	DNA gyrase subunit B
HMEL016032g1.t1	aquaporin-11 isoform X2
HMEL032824g1.t1	heme peroxidase 2
HMEL012304g1.t1	myofilin variant A
HMEL032062g1.t1	basic proline-rich protein isoform X1
HMEL013231g1.t1	---NA---
HMEL012441g1.t1	tyrosine aminotransferase
HMEL036439g1.t1	tigger transposable element-derived protein 4-like
HMEL037733g1.t1	retinol dehydrogenase 11-like
HMEL003142g1.t1	uncharacterized protein LOC113400583

HMEL012064g1.t3 basement membrane-specific heparan sulfate proteoglycan core protein isoform X4
 HMEL004510g1.t1 cuticle protein 3-like
 HMEL015709g1.t1 bromodomain-containing protein DDB_G0280777-like
 HMEL002212g1.t1 chitin synthase chs-2 isoform X3
 HMEL006697g1.t3 phosphatidate phosphatase LPIN3 isoform X1
 HMEL006745g1.t1 circadian clock-controlled protein-like
 HMEL016159g1.t3 serine/threonine-protein kinase tousled-like 2 isoform X4
 HMEL008819g1.t1 mucin-5AC-like isoform X1
 HMEL013284g1.t1 probable malate dehydrogenase, mitochondrial
 HMEL034636g1.t1 uncharacterized protein LOC117993623
 HMEL008837g1.t1 probable 4-coumarate--CoA ligase 1
 HMEL008833g1.t1 alpha-actinin, sarcomeric isoform X1
 HMEL013977g1.t1 ---NA---
 HMEL010976g1.t1 pollen-specific leucine-rich repeat extensin-like protein 1
 HMEL036545g1.t1 probable isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial isoform X3
 HMEL011221g1.t1 angiotensin-converting enzyme-like
 HMEL002923g1.t1 uncharacterized protein LOC113401355 isoform X1
 HMEL037732g1.t1 retinol dehydrogenase 11-like
 HMEL035749g1.t1 hypothetical protein KGM_207397
 HMEL016978g1.t1 Type I inositol-1,4,5-trisphosphate 5-phosphatase
 HMEL014952g1.t1 flocculation protein FLO11-like
 HMEL006697g2.t1 phosphatidate phosphatase LPIN3 isoform X1
 HMEL004916g1.t1 neuropathy target esterase sws isoform X3
 HMEL034453g1.t2 plasma membrane calcium-transporting ATPase 2 isoform X1
 HMEL017210g1.t1 cytochrome b5-like
 HMEL016985g1.t1 myosin light chain alkali isoform X2
 HMEL021432g1.t1 Secreted protein member of chemokine factor super family
 HMEL010373g1.t1 uncharacterized LOC106113675 precursor
 HMEL036944g1.t1 ---NA---
 HMEL021529g1.t2 chloride intracellular channel exc-4 isoform X2
 HMEL015740g1.t1 juvenile hormone-binding protein-like
 HMEL032058g1.t1 uncharacterized protein ZK1073.1 isoform X3
 HMEL016094g1.t1 protein ABHD18
 HMEL020353g1.t1 b(0,+)-type amino acid transporter 1-like isoform X1
 HMEL009645g1.t1 arginine kinase isoform X1
 HMEL015094g1.t1 histone-lysine N-methyltransferase SMYD3
 HMEL003666g3.t1 ---NA---
 HMEL012654g1.t1 mitochondrial genome maintenance exonuclease 1-like
 HMEL017685g2.t1 glycine N-methyltransferase
 HMEL036491g1.t1 tropomyosin-2 isoform X20
 HMEL011355g1.t1 spindle pole body component 110 isoform X1
 HMEL006484g1.t1 ankyrin-3-like isoform X2

HMEL005861g5.t1	proton-coupled amino acid transporter-like protein CG1139
HMEL034896g1.t1	carotenoid isomeroxygenase-like
HMEL037501g1.t1	cytochrome c1, heme protein, mitochondrial
HMEL035254g1.t2	paxillin isoform X1
HMEL034773g1.t2	Tyrosine-protein phosphatase non-receptor type 13
HMEL036108g1.t1	hypothetical protein KGM_210950
HMEL017436g1.t1	cuticular protein glycine-rich 20
HMEL006014g1.t1	endocuticle structural glycoprotein SgAbd-5-like
HMEL030470g1.t1	pancreatic triacylglycerol lipase-like
HMEL006308g1.t1	cytochrome b-c1 complex subunit 2, mitochondrial
HmGr22	gustatory receptor
HMEL033041g1.t1	C-type lectin 27kD
HMEL007261g2.t1	E3 ubiquitin-protein ligase ZNRF2 isoform X2
HMEL004332g1.t1	putative Insulin receptor precursor
HMEL007136g1.t1	cuticle protein 1-like
HMEL037950g1.t1	RING finger protein 145
HMEL018081g1.t1	hyaluronidase PH-20-like isoform X1
HMEL034253g1.t1	uncharacterized LOC106121975 precursor
HMEL015052g1.t1	arylphorin subunit alpha-like
HMEL011399g1.t1	sodium- and chloride-dependent glycine transporter 1-like
HMEL031459g1.t1	tubulin beta-1 chain
HMEL002405g1.t1	---NA---
HMEL016386g1.t1	protein 4.1 homolog isoform X4
HMEL006811g2.t1	chitin deacetylase 1
HMEL009091g1.t1	Major facilitator superfamily domain-containing protein 6
HMEL005970g1.t1	1-acyl-sn-glycerol-3-phosphate acyltransferase alpha-like
HMEL037845g1.t1	b(0,+)-type amino acid transporter 1
HMEL036494g1.t3	synaptotagmin-4
HMEL007479g3.t1	serpin 100A
HMEL030607g1.t1	simila to CG34115
HMEL014313g1.t2	echinoderm microtubule-associated protein-like 2 isoform X1
HMEL022065g1.t1	deleted in malignant brain tumors 1 protein-like
HMEL009165g1.t1	uncharacterized protein LOC113398198 isoform X2
HMEL011030g1.t1	---NA---

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ID	Annotation
HMEL005364g1.t1	cytochrome b5-related protein-like
HMEL009656g1.t1	ras-related protein Rab6 isoform X2
HMEL006533g2.t1	cystathionine gamma-lyase
HMEL032652g1.t1	RNA-directed DNA polymerase from mobile element jockey-like
HMEL037464g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL017476g1.t1	apolipoprotein D
HMEL014309g1.t1	23 kDa integral membrane protein-like

HMEL014628g1.t1	alpha-tocopherol transfer protein-like
HMEL006217g2.t1	cocoonase 4
HMEL034667g1.t1	cilia- and flagella-associated protein 206-like
HMEL003312g1.t3	inter-alpha-trypsin inhibitor heavy chain H4-like isoform X1
HMEL016125g1.t1	low density lipoprotein receptor adapter protein 1-A
HMEL030903g1.t1	RNA-directed DNA polymerase from mobile element jockey-like
HMEL031098g1.t1	multiple C2 and transmembrane domain-containing protein-like isoform X1
HMEL037976g1.t1	probable G-protein coupled receptor Mth-like 3
HMEL005258-RA	MAM and LDL-receptor class A domain-containing protein 2-like
HMEL022269g1.t1	saccharopine dehydrogenase-like oxidoreductase
HMEL003531g1.t1	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase isoform X1
HMEL004522g1.t1	inactive ubiquitin carboxyl-terminal hydrolase MINDY-4B isoform X1
HMEL011706g1.t1	uncharacterized protein LOC113394761
HMEL011122g1.t1	neuronal acetylcholine receptor subunit beta-3-like
HMEL003565g1.t1	protein spinster homolog 1
HMEL035990g1.t1	Transposase-like protein
HMEL015980g1.t1	seroin transcript 2B
HMEL008484g1.t1	---NA---
HMEL009639g1.t1	17-beta-hydroxysteroid dehydrogenase 13-like isoform X1
HMEL034386g1.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL018039g1.t1	CCR4-NOT transcription complex subunit 7-like isoform X1
HMEL008705g1.t1	uncharacterized protein LOC113394985
HMEL014850g1.t2	insulin-like growth factor II
HMEL030017g1.t1	ceramide phosphoethanolamine synthase
HMEL005103g1.t1	isopentenyl-diphosphate Delta-isomerase 1
HMEL014623g1.t1	protein transport protein Sec61 subunit alpha
HMEL013489g1.t1	putative inactive cysteine synthase 2
HMEL010112g1.t2	atlastin isoform X1
HMEL005461-RA	beta-1,3-glucan-binding protein-like
HMEL013073g1.t1	regulator of microtubule dynamics protein 1
HMEL005900g1.t1	phospholipase ABHD3
HMEL014924g1.t1	uncharacterized protein LOC113402596 isoform X2
HMEL021635g1.t1	FERM domain-containing protein 8
HMEL016571g1.t1	transmembrane protein 165 isoform X1
HMEL008934g1.t1	uncharacterized transporter slc-17.2-like
HMEL030678g1.t1	Early 94 kDa protein
HMEL006853g1.t1	alpha-tocopherol transfer protein-like
HMEL037063g1.t1	uncharacterized protein LOC113401185 isoform X2
HMEL010437g1.t1	protein tramtrack, beta isoform-like isoform X2
HMEL036443g1.t1	hypothetical protein B5X24_HaOG202969, partial
HMEL011374g1.t1	venom acid phosphatase Acph-1-like
HMEL022544g1.t1	L-dopachrome tautomerase yellow-f2-like

HMEL013783g1.t1	uncharacterized protein LOC113394807
HMEL004896g1.t1	elongation of very long chain fatty acids protein AAEL008004-like
HMEL017350g1.t1	6-phosphogluconolactonase
HMEL034320g1.t1	putative glycerol-3-phosphate acyltransferase
HMEL033214g1.t1	ectonucleoside triphosphate diphosphohydrolase 5 isoform X2
HMEL015722g1.t1	palmitoyltransferase ZDHHC15-like isoform X2
HMEL032434g1.t1	hypothetical protein KGM_208333
HMEL014060g2.t1	juvenile hormone acid O-methyltransferase
HMEL012832g2.t1	long-chain fatty acid transport protein 4-like
HMEL010801g3.t1	Probable RNA-directed DNA polymerase from transposon X-element
HMEL002874g1.t1	lysozyme-like isoform X1
HMEL022206g1.t1	proton-coupled amino acid transporter-like protein pathetic
HMEL016015g4.t1	fatty-acid amide hydrolase 2-like
HMEL013159g1.t1	facilitated trehalose transporter Tret1-like
HMEL003285g1.t1	short/branched chain specific acyl-CoA dehydrogenase, mitochondrial
HMEL017873g1.t1	protein split ends
HMEL011226g1.t1	probable chitinase 2
HMEL011933g1.t1	putative phospholipase B-like lamina ancestor
HMEL034780g1.t1	juvenile hormone acid O-methyltransferase
HMEL017024g1.t1	hemocytin
HMEL003387g1.t1	short/branched chain specific acyl-CoA dehydrogenase, mitochondrial
HMEL016321g1.t1	pyrroline-5-carboxylate reductase-like isoform X1
HMEL009544g1.t1	SPARC
HMEL011646g1.t1	centrosomal protein of 164 kDa-like
HMEL003683g1.t1	serine protease snake-like
HMEL035367g1.t1	fatty acyl-CoA reductase wat-like
HMEL010952g1.t1	acyl-CoA-binding protein homolog
HMEL021488g1.t1	prostaglandin reductase 1-like
HmCSP7	chemosensory protein
HMEL030967g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL033671g1.t1	uncharacterized protein LOC112055534 isoform X1
HMEL016136g1.t1	protein seele
HMEL008165g1.t1	phosphatidylglycerophosphatase and protein-tyrosine phosphatase 1
HmOBP17	olfactory binding protein
HMEL009003g1.t2	aminopeptidase N-like isoform X1
HMEL013164g1.t1	facilitated trehalose transporter Tret1-like
HMEL034644g1.t1	facilitated trehalose transporter Tret1-like
HMEL032593g1.t1	pupal cuticle protein 36-like
HMEL033015g1.t1	glycerophosphocholine phosphodiesterase GPCPD1 isoform X1
HMEL037131g1.t2	angiotensin-converting enzyme-like isoform X3

HMEL014355g1.t1	phosphatidylinositol transfer protein alpha isoform
HMEL013008g1.t2	zinc finger protein 271-like isoform X4
HMEL020420g1.t1	unnamed protein product
HMEL008087g2.t1	KRAB-A domain-containing protein 2-like
HMEL009003g2.t1	aminopeptidase N-like isoform X1
HMEL003116-RA	ejaculatory bulb-specific protein 3-like
HMEL017894g2.t1	cGMP-dependent protein kinase, isozyme 2 forms cD4/T1/T3A/T3B isoform X3
HMEL011674g1.t1	Cuticle protein
HMEL020720g1.t1	cuticular protein RR-2 motif 125 precursor
HMEL004525g1.t1	carboxypeptidase inhibitor
HMEL009864g1.t1	putative fatty acyl-CoA reductase CG8306
HMEL005451g1.t1	hydroxymethylglutaryl-CoA synthase 1
HMEL006098g1.t1	transketolase-like protein 2
HMEL035405g1.t1	scavenger receptor class B member 1
HMEL015572g1.t1	saccharopine dehydrogenase-like oxidoreductase
HMEL013160g1.t1	facilitated trehalose transporter Tret1-like
HMEL035350g1.t1	serine protease snake-like
HMEL016262g1.t1	inositol-3-phosphate synthase
HMEL004443g2.t1	ecdysteroid 22-kinase
HMEL032045g1.t1	elongation of very long chain fatty acids protein 7-like
HMEL008879g2.t1	putative inorganic phosphate cotransporter isoform X2
HMEL036015g1.t1	glucose transporter type 1-like isoform X2
HMEL010291g1.t1	Bm8 interacting protein 2d-2
HMEL018123-RA	allergen Tha p 1-like
HMEL010864g1.t1	protein disulfide-isomerase
HMEL036736g1.t1	estradiol 17-beta-dehydrogenase 11-like
HMEL014822g1.t1	glycerol-3-phosphate acyltransferase 3 isoform X2
HMEL011017g1.t1	amino acid transporter AVT1D-like
HMEL015713-RA	venom protease-like
HMEL031425g1.t1	reverse transcriptase
HMEL032044g1.t1	elongation of very long chain fatty acids protein 7-like
HMEL034889g1.t1	facilitated trehalose transporter Tret1-like
HMEL006231g1.t1	very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase hpo-8
HMEL030029g1.t1	Probable RNA-directed DNA polymerase from transposon BS
HMEL031453g1.t1	rhophilin-2 isoform X1
HMEL002899-RA	cuticular protein CPG24
HMEL017415g1.t1	putative carbonic anhydrase 5
HMEL010062g1.t1	potassium channel subfamily K member 1-like isoform X1
HMEL014782g1.t1	protein takeout-like
HMEL004160g1.t2	aldehyde dehydrogenase, dimeric NADP-preferring isoform X1
HMEL012374g1.t1	seminal fluid protein HACP057
HMEL011074g1.t1	very-long-chain 3-oxoacyl-CoA reductase
HMEL020648g1.t1	carbonic anhydrase-related protein 10 isoform X2

HMEL037658g1.t1	ATP-binding cassette sub-family G member 1
HMEL036190g1.t1	carboxylesterase 3
HMEL022269g2.t1	saccharopine dehydrogenase-like oxidoreductase
HMEL013766g1.t1	cell wall protein DAN4-like
HMEL016024g1.t1	lysozyme 2-like
HMEL032637g1.t1	hypothetical protein B5V51_2590
HMEL006535g4.t1	trans-1,2-dihydrobenzene-1,2-diol dehydrogenase-like
HMEL004963g1.t1	---NA---
HMEL034887g1.t1	facilitated trehalose transporter Tret1-like
HMEL013887g1.t1	putative fatty acyl-CoA reductase CG5065
HMEL013249g1.t1	ATP-citrate synthase
HMEL035526g1.t1	peptide transporter family 1 isoform X1
HMEL003470g1.t1	scavenger receptor class B member 1-like
HMEL014145g1.t1	neural/ectodermal development factor IMP-L2-like
HMEL002823g1.t1	acetyl-coenzyme A synthetase
HMEL031782g1.t1	elongation of very long chain fatty acids protein 6
HMEL004478g1.t1	juvenile hormone esterase-like
HMEL034272g1.t1	juvenile hormone binding protein an-0921 precursor
HMEL016177g1.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL012150g1.t1	solute carrier family 22 member 13-like
HMEL015278g1.t1	pancreatic triacylglycerol lipase-like
HmOBP18	olfactory binding protein
HMEL003519g1.t1	myrosinase 1-like
HMEL005817g1.t1	---NA---
HMEL030103g1.t1	ommochrome-binding protein-like
HMEL003519g2.t1	myrosinase 1-like
HMEL003361g1.t1	inactive pancreatic lipase-related protein 1-like
HMEL003355g1.t1	multidrug resistance-associated protein 4-like
HMEL003355g2.t1	multidrug resistance-associated protein 4-like
HMEL011197g1.t1	cuticle protein 1
HmOBP50	olfactory binding protein
HMEL011197g2.t1	cuticle protein 1-like
HMEL011196g1.t1	cuticle protein 1-like
HMEL015978g2.t1	---NA---
HMEL006217g1.t1	cocoonase 4
HMEL036388g1.t1	pancreatic lipase-related protein 2-like
HMEL015978g1.t1	---NA---
HMEL022638g5.t1	pancreatic lipase-related protein 2-like
HMEL022638g4.t1	pancreatic lipase-related protein 2-like

Supplementary Table 9. Gene annotation of upregulated genes when comparing five-day-old and two-day-old female antenna, leg, and mouthpart tissues in *H. melpomene*.

Upregulated genes in antennae of <i>H. melpomene</i> two-day-old females	
ID	Annotation
HMEL003670g1.t1	pupal cuticle protein G1A-like
HMEL007002g1.t1	larval cuticle protein 1-like
HMEL037608g1.t1	cuticle protein LPCP-23-like
HmOBP5	olfactory binding protein
HmOBP42	olfactory binding protein
HMEL013908g1.t1	cuticular protein CPH
HMEL011699g1.t1	uncharacterized protein LOC113394755
HMEL013909g1.t1	cuticular protein CPH
HMEL022129g1.t1	uncharacterized protein LOC113394950
HMEL010373g1.t1	uncharacterized LOC106113675 precursor
HMEL003671g1.t1	putative cuticle protein
HMEL036491g1.t1	tropomyosin-2 isoform X20
HMEL008070g1.t1	tetra-peptide repeat homeobox protein 1-like
HMEL006214g1.t1	flocculation protein FLO11 isoform X1
HmCSP28	chemosensory protein
HMEL016705-RA	cytochrome P450 4g15
HMEL031924g1.t1	endocuticle structural glycoprotein SgAbd-8-like
HMEL038045g1.t1	integumentary mucin C.1
HMEL014774g1.t1	uncharacterized protein LOC113395164
HMEL032516g1.t1	---NA---
HMEL030990g1.t1	actin
HMEL033453g1.t1	---NA---
HMEL037611g1.t1	putative cuticle protein
HMEL030840g1.t1	facilitated trehalose transporter Tret1-like isoform X1
HMEL017435g2.t1	retinol dehydrogenase 13-like
HMEL032593g1.t1	pupal cuticle protein 36-like
HMEL031897g1.t2	pancreatic triacylglycerol lipase-like isoform X1
HMEL021946g1.t2	UNC93-like protein MFSD11
HMEL007484g1.t1	ralA-binding protein 1 isoform X1
HMEL033281g1.t1	pickpocket protein 28-like
HMEL030728g1.t1	LIX1-like protein
HMEL005422g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL002212g1.t2	chitin synthase A
HMEL009297g1.t1	skin secretory protein xP2-like
HMEL014632g1.t1	endochitinase-like isoform X2
HMEL011066g2.t1	alpha-tocopherol transfer protein-like
HMEL013908g2.t1	cuticular protein CPH
HMEL007743g1.t1	dihydropyrimidine dehydrogenase [NADP(+)]
HMEL037224g1.t1	solute carrier family 2, facilitated glucose transporter member 1-like
HMEL014104g1.t1	uncharacterized protein LOC113401956 isoform X5

HMEL032309g1.t1 esterase FE4-like
 HMEL005816g1.t1 uncharacterized protein LOC117987429 isoform X2
 HMEL013050g2.t1 protein NDRG3 isoform X1
 HmCSP7 chemosensory protein
 HMEL036377g1.t1 synaptic vesicle glycoprotein 2B-like
 HMEL006740g3.t1 ---NA---
 HMEL007151g1.t2 tropomyosin-2 isoform X8
 HMEL002717g1.t1 4-hydroxyphenylpyruvate dioxygenase-like
 HMEL015815g1.t2 protein spire isoform X4
 HMEL033459g1.t1 zinc finger DNA binding protein
 HMEL010010g1.t1 ecdysone-induced protein 74EF isoform X1
 HMEL033108g1.t1 putative inactive cysteine synthase 2
 HMEL032926g1.t1 senecionine N-oxygenase isoform X1
 HMEL003116-RA ejaculatory bulb-specific protein 3-like
 HMEL034483g1.t1 uncharacterized threonine-rich GPI-anchored glycoprotein PJ4664.02-like
 HMEL011715g1.t1 ---NA---
 HMEL009672g1.t1 chitinase A-like
 HMEL036941g1.t1 terminal nucleotidyltransferase 5C isoform X2
 HMEL014190g1.t1 ATP-dependent RNA helicase glh-1-like
 HMEL038072g1.t1 putative serine carboxypeptidase CPVL
 HMEL013037g3.t1 membrane-bound alkaline phosphatase-like
 HMEL031257g1.t1 ecdysone-induced protein 74EF isoform X3
 HMEL015171g2.t1 glutamine--fructose-6-phosphate aminotransferase [isomerizing] 1-like
 HMEL013368g1.t1 uncharacterized protein LOC113393799 isoform X1
 HmOBP31 olfactory binding protein
 HMEL034253g1.t1 uncharacterized LOC106121975 precursor
 HMEL010636g1.t1 alpha-tocopherol transfer protein-like
 HMEL010409g1.t1 protein yellow-like
 HMEL003074g1.t1 global transcription regulator sge1
 HMEL011484g1.t1 uncharacterized protein LOC116769225 isoform X3
 HMEL033261g1.t1 glucose dehydrogenase [FAD, quinone]-like
 HMEL005930g1.t2 transcriptional coactivator YAP1 isoform X3
 HMEL004962g1.t1 class A basic helix-loop-helix protein 15-like
 HMEL032062g1.t1 basic proline-rich protein isoform X1
 HMEL013037g2.t1 membrane-bound alkaline phosphatase-like
 HMEL010347g1.t1 protein obstructor-E
 HMEL036942g1.t1 terminal nucleotidyltransferase 5C isoform X2
 HMEL020967g1.t1 probable chitinase 10
 HMEL007153g2.t1 fructose-1,6-bisphosphatase 1
 HMEL009805g1.t1 uncharacterized protein LOC113404204, partial
 HMEL036006g1.t1 protein unc-13 homolog C-like
 HMEL010409g2.t1 protein yellow-like
 HMEL037115g1.t1 eukaryotic translation initiation factor 4 gamma-like
 HMEL002880g1.t1 lysozyme-like

HMEL006811g2.t1	chitin deacetylase 1
HMEL034277g1.t1	circadian clock-controlled protein-like
HMEL010976g1.t1	pollen-specific leucine-rich repeat extensin-like protein 1
HMEL034795g1.t1	N-fatty-acyl-amino acid synthase/hydrolase PM20D1-like
HMEL015031g1.t1	putative fatty acyl-CoA reductase CG5065
HMEL014363g1.t1	zinc finger CCCH domain-containing protein 13 isoform X1
HMEL013096g1.t1	sodium/potassium-transporting ATPase subunit beta-2-like
HMEL015709g1.t1	bromodomain-containing protein DDB_G0280777-like
HMEL007151g1.t3	Tropomyosin-1, isoforms 9A/A/B
HMEL006578g1.t1	unnamed protein product
HMEL010344g1.t1	protein obstructor-E isoform X1
HMEL004491g1.t1	protein borderless
HMEL006084g1.t1	uncharacterized protein LOC113391442
HMEL017189g1.t1	monocarboxylate transporter 12
HMEL009298g2.t1	pollen-specific leucine-rich repeat extensin-like protein 2
HMEL006799g1.t1	protein 60A
HMEL021221g1.t1	yellow-c
HMEL033890g1.t1	reverse transcriptase
HMEL002008g1.t1	probable chitinase 10
HMEL026005g1.t1	cytochrome P450 6B7-like
HMEL013423g1.t2	nucleobindin-2 isoform X1
HMEL004083g2.t1	uncharacterized protein LOC116779101 isoform X3
HMEL007866g1.t2	protein goliath isoform X1
HMEL032795g1.t1	uncharacterized protein LOC113394989 isoform X1
HMEL017418g1.t1	sorbitol dehydrogenase-like
HMEL005250g1.t1	hexokinase-2-like
HMEL035331g1.t1	uncharacterized LOC106124743 precursor
HMEL014074g1.t1	ecdysone-inducible protein E75 isoform X3
HMEL030772g1.t1	G-protein coupled receptor 64-like
HMEL017144g1.t1	Pancreatic lipase-related protein 1
HMEL004083g1.t1	simila to CG13188
HMEL011150g1.t1	D-beta-hydroxybutyrate dehydrogenase, mitochondrial
HMEL004233g1.t1	uncharacterized protein LOC117986261
HMEL002212g1.t1	chitin synthase chs-2 isoform X3
HMEL021442g1.t1	serine/threonine-protein kinase mTOR
HMEL033954g1.t1	nose resistant to fluoxetine protein 6-like
HMEL013360-RA	protein spaetzle 5
HMEL004535g1.t1	skin secretory protein xP2-like
HMEL006085g2.t1	transcription factor SOX-11 isoform X1
HMEL004593g2.t2	trehalase-like isoform X1
HMEL035298g1.t1	ester hydrolase C11orf54 homolog isoform X1
HMEL009754g1.t1	hexokinase type 2 isoform X1
HMEL009088g1.t1	protein bunched, class 1/class 3/D/E isoforms isoform X4
HMEL033431g1.t1	uncharacterized protein LOC113393645 isoform X1

HMEL034493g1.t1 Cytochrome b
 HMEL033952g1.t1 nose resistant to fluoxetine protein 6-like
 HMEL015975g1.t1 uncharacterized LOC106124388 precursor
 HMEL032592g1.t1 pupal cuticle protein 36-like
 HMEL036829g1.t1 uncharacterized protein LOC113394809
 HMEL008727g1.t1 collagen alpha-1(IX) chain-like
 HMEL012803g1.t1 progesterin and adipoQ receptor family member 3
 HMEL006580g2.t1 putative Headcase protein
 HMEL037664g1.t1 protein extra-macrochaetae
 HMEL016977g1.t2 epsilon-sarcoglycan isoform X1
 HMEL015861g1.t1 pupal cuticle protein PCP52-like
 HMEL033978g1.t1 serine-rich adhesin for platelets-like isoform X1
 HMEL021388g1.t1 anther-specific proline-rich protein APG
 HMEL031058g1.t2 nuclear receptor coactivator 7 isoform X1
 HMEL003137g1.t1 glycerol kinase isoform X2
 HMEL015887g1.t2 aldo-keto reductase AKR2E4-like
 HMEL032520g1.t1 ---NA---
 HMEL004916g3.t4 neuropathy target esterase sws isoform X4
 HMEL025015g1.t1 heterogeneous nuclear ribonucleoprotein A1, A2/B1 homolog
 HMEL008156g3.t1 mothers against decapentaplegic homolog 6
 HMEL004893g1.t1 adhesive plaque matrix protein-like isoform X1
 HMEL010416g1.t1 serine/threonine-protein phosphatase rdgC
 HMEL008056g1.t1 phospholipase A1 member A-like
 HMEL012199g2.t1 WD repeat-containing protein 47 isoform X2
 HmOr7 olfactory receptor
 HMEL033041g1.t1 C-type lectin 27kD
 HMEL008353g1.t2 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1
 HMEL038147g1.t1 ---NA---
 HMEL010346g1.t1 protein obstructor-E-like
 HMEL010106g1.t1 pancreatic lipase-related protein 2
 HMEL015169g1.t1 ---NA---
 HMEL033982g1.t1 proton-coupled amino acid transporter-like protein pathetic
 HMEL004412g1.t1 uncharacterized protein LOC113401620
 HMEL036492g1.t1 tropomyosin-2 isoform X5
 HMEL002564-RA death-associated inhibitor of apoptosis 1-like isoform X2
 HMEL025040g1.t2 sodium/potassium/calcium exchanger 4 isoform X2
 HMEL036493g1.t1 tropomyosin-1, isoforms 9A/A/B isoform X17
 HMEL004500g3.t1 reticulon-3-B isoform X4
 HMEL031240g1.t1 xin actin-binding repeat-containing protein 2 isoform X1
 HMEL008879g2.t1 putative inorganic phosphate cotransporter isoform X2
 HMEL012642g2.t1 mucin-5AC isoform X2
 HMEL015501g1.t1 mucin-17 isoform X1
 HMEL031905g1.t1 collagen alpha-1(I) chain-like
 HMEL006580g1.t1 headcase protein

Upregulated genes in antennae of *H. melpomene* five-day-old females

ID	Annotation
HMEL015299g2.t1	intracellular protein transport protein USO1-like
HMEL037131g1.t2	angiotensin-converting enzyme-like isoform X3
HMEL005534g1.t1	Pacifastin-like protease inhibitor cvp4
HMEL014850g1.t2	insulin-like growth factor II
HMEL033135g1.t1	sodium/potassium-transporting ATPase subunit beta-1-like
HMEL008795g1.t3	chromatin complexes subunit BAP18-like isoform X3
HMEL010062g1.t1	potassium channel subfamily K member 1-like isoform X1
HMEL037600g1.t1	transmembrane protein 209-like
HMEL003796g1.t1	regulation of enolase protein 1-like
HMEL011631g1.t1	homocysteine S-methyltransferase 2-like
HMEL010631g2.t1	alpha-tocopherol transfer protein-like
HMEL030682g1.t1	dolichol phosphate-mannose biosynthesis regulatory protein
HMEL013737-RA	cytochrome P450 9e2-like
HMEL003260g1.t1	probable salivary secreted peptide
HMEL009024g1.t1	translocon-associated protein subunit beta
HMEL031498g1.t1	cationic amino acid transporter 2-like
HMEL033667g1.t1	xanthine dehydrogenase-like
HMEL032250g1.t1	uncharacterized protein LOC112055290
HMEL036244g1.t1	regucalcin-like
HMEL010826g1.t1	copper chaperone for superoxide dismutase
HMEL018123-RA	allergen Tha p 1-like
HMEL002376g2.t1	serine protease inhibitor dipetalogastin-like isoform X2
HMEL022619-RA	UDP-glucuronosyltransferase 3A1-like
HMEL008220g1.t1	lysozyme 2-like
HMEL017464-RA	cytochrome P450 6k1-like
HMEL005392g2.t1	RNA exonuclease 4
HMEL034385g1.t1	probable methylthioribulose-1-phosphate dehydratase
HMEL034406g1.t1	circadian clock-controlled protein-like
HMEL017621g1.t1	microtubule-associated protein 1A isoform X2
HMEL010126g1.t4	seminal fluid protein HACP059
HMEL003683g1.t1	serine protease snake-like
HMEL003497g2.t1	gamma-aminobutyric acid receptor subunit beta-like
HMEL014623g1.t1	protein transport protein Sec61 subunit alpha
HMEL036946g1.t1	5-aminolevulinic synthase, nonspecific, mitochondrial
HMEL016873g1.t1	aminopeptidase N-like isoform X1
HMEL015324g1.t1	Replication Protein A3
HMEL010934-RA	cytochrome P450 4C1-like
HMEL016015g4.t1	fatty-acid amide hydrolase 2-like
HMEL008530g1.t1	HD domain-containing protein 2
HMEL005861g5.t1	proton-coupled amino acid transporter-like protein CG1139
HMEL008079g1.t1	uncharacterized protein LOC112055532 isoform X1
HMEL034892g1.t1	facilitated trehalose transporter Tret1-like

HMEL004850g2.t1 dopamine N-acetyltransferase-like
 HMEL034521g1.t1 unnamed protein product
 HMEL002271g1.t1 hypothetical protein KGM_209237
 HMEL034722g1.t1 cytochrome P450 6B1-like
 HMEL006260g1.t1 antichymotrypsin-2-like isoform X2
 HMEL030563g1.t1 ---NA---
 HMEL010310g2.t1 hypothetical protein KGM_213858A, partial
 HMEL021464g2.t1 prostaglandin reductase 1-like
 HMEL005376g1.t1 D-arabinitol dehydrogenase 1-like
 HMEL011210g1.t1 protein CDV3 homolog
 HMEL010126g1.t2 seminal fluid protein HACP059
 HMEL010338g1.t1 UPF0764 protein C16orf89 homolog
 HMEL005362g1.t1 probable phosphoserine aminotransferase
 HMEL034838g1.t1 stearyl-CoA desaturase 5-like isoform X2
 HMEL002092g1.t1 protein yellow-like isoform X1
 HMEL011192g1.t1 putative ammonium transporter 2
 HMEL031325g1.t1 ---NA---
 HMEL036645g1.t1 ---NA---
 HMEL013834g1.t1 alcohol dehydrogenase class-3
 HMEL017000g1.t1 peroxidase-like isoform X3
 HMEL012931g1.t1 putative Y47D3B.4
 HMEL015727g1.t1 uncharacterized protein LOC113395464
 HMEL031326g1.t1 ---NA---
 HMEL017000g2.t1 peroxidase-like isoform X1
 HMEL015278g1.t1 pancreatic triacylglycerol lipase-like
 HMEL017233g1.t1 Krueppel homolog 1-like
 HMEL014233g1.t1 venom protease-like
 HMEL020539g1.t1 cytochrome P450 6B1-like
 HMEL016116g1.t1 uncharacterized protein LOC113395382
 HMEL005392g3.t1 RNA exonuclease 4
 HMEL010695g1.t2 facilitated trehalose transporter Tret1-like
 HMEL003022g1.t1 xanthine dehydrogenase 1-like
 HMEL010958g1.t1 modular serine protease-like
 HmelUGT33X1.mrna UGT
 HMEL037992g1.t1 senecionine N-oxygenase-like
 HMEL005882g2.t1 esterase E4-like
 HMEL010694g1.t1 facilitated trehalose transporter Tret1-like
 HMEL037185g1.t1 gelsolin, cytoplasmic-like
 HMEL006237g1.t1 serine protease inhibitor 88Ea-like
 HMEL034896g1.t1 carotenoid isomeroxygenase-like
 HMEL015572g1.t1 saccharopine dehydrogenase-like oxidoreductase
 HMEL037186g1.t1 gelsolin, cytoplasmic-like
 HMEL007637g1.t1 ecdysteroid-regulated 16 kDa protein-like
 HMEL022259g3.t1 ---NA---

HMEL010126g1.t3	seminal fluid protein HACP059
HMEL016763g1.t1	putative carbonic anhydrase 3
HMEL014492g1.t1	phospholipase A1-like
HmelUGT40V3.mrna	UGT
HMEL032052g1.t1	cuticular protein RR-3 motif 148 precursor
HMEL003561g3.t1	Ribonuclease H-like domain
HmelGSTs9.mrna	GST
HMEL002163g1.t1	venom carboxylesterase-6-like
HMEL013405g1.t1	sodium/potassium/calcium exchanger 4-like
HMEL017304g1.t1	seminal fluid protein HACP059
HMEL002925g1.t1	formin-like protein 14
HMEL013136g4.t1	myrosinase 1-like
HMEL003497g1.t1	DUF4817 domain-containing protein
HMEL032659g1.t1	macrophage mannose receptor 1-like
HMEL011919g1.t1	protein hairy
HMEL008541g1.t1	protein app1-like
HMEL016204g2.t1	delta-1-pyrroline-5-carboxylate synthase isoform X2
HMEL036862g1.t1	toll-like receptor 2
HMEL016367g1.t1	uridine 5-monophosphate synthase-like
HMEL014308g1.t1	urbain precursor
HMEL005973g1.t1	facilitated trehalose transporter Tret1-like
HMEL016237g1.t1	circadian clock-controlled protein-like
HmOBP47	olfactory binding protein
HmelUGT40V2.mrna	UGT
HMEL006174g2.t1	uncharacterized protein LOC113402709
HMEL016204g1.t1	delta-1-pyrroline-5-carboxylate synthase isoform X1
HMEL007905g1.t1	glycogen-binding subunit 76A isoform X1
HMEL015726g1.t1	stearoyl-CoA desaturase 5-like
HMEL020720g1.t1	cuticular protein RR-2 motif 125 precursor
HMEL031902g1.t1	protein THEM6-like
HMEL035250g1.t1	CD63 antigen-like
HMEL005285g2.t1	trace amine-associated receptor 1
HmOBP50	olfactory binding protein
HMEL009671g1.t1	putative protease inhibitor 4
HMEL030086g1.t1	prostamide/prostaglandin F synthase-like isoform X1
HMEL011130g1.t1	SERAC1 protein
HMEL021483g2.t2	---NA---
HMEL013064g1.t1	serine protease snake-like
HMEL017107g1.t1	transmembrane protease serine 9-like
HMEL005773g1.t1	pollen-specific leucine-rich repeat extensin-like protein 1
HMEL022269g2.t1	saccharopine dehydrogenase-like oxidoreductase
HMEL009081g1.t1	protein scarlet-like
HMEL005408g2.t2	elongation of very long chain fatty acids protein AAEL008004 isoform X2
HMEL006784g1.t1	alpha,alpha-trehalose-phosphate synthase [UDP-forming]

HMEL034605g1.t2	uncharacterized LOC106106657 precursor
HMEL008807g1.t1	tan protein
HMEL005285g1.t1	putative sporulation protein YqfD
HMEL011873g2.t1	arylsulfatase B-like
HMEL000006-RA	trehalase 1a
HMEL012366g1.t1	uncharacterized protein LOC113394873
HMEL004446g1.t1	uncharacterized protein LOC116768575
HMEL008412g1.t1	membrane alanyl aminopeptidase-like
HMEL014225g1.t1	protein phosphatase 1 regulatory subunit 3C
HMEL014821g1.t2	aldose reductase-like isoform X2
HMEL017149-RA	Cytochrome P450 4V2
HMEL032765g1.t1	---NA---
HMEL017154-RA	cytochrome P450 6B2-like
HMEL005596-RA	ejaculatory bulb-specific protein 3-like
HMEL011374g1.t1	venom acid phosphatase Acph-1-like
HMEL013489g1.t1	putative inactive cysteine synthase 2
HMEL012374g1.t1	seminal fluid protein HACP057
HMEL004963g1.t1	---NA---

Upregulated genes in legs of *H. melpomene* two-day-old females

ID	Annotation
HMEL016141g1.t1	uncharacterized LOC106128526
HMEL032926g1.t1	senecionine N-oxygenase isoform X1
HMEL007002g1.t1	larval cuticle protein 1-like
HMEL031927g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL006214g1.t1	flocculation protein FLO11 isoform X1
HMEL031928g1.t1	endocuticle structural glycoprotein SgAbd-2-like
HMEL013199g1.t2	phosphoenolpyruvate carboxykinase [GTP]-like isoform X2
HMEL011699g1.t1	uncharacterized protein LOC113394755
HMEL036512g1.t1	organic cation transporter protein-like
HMEL014632g1.t1	endochitinase-like isoform X2
HMEL011703g1.t1	---NA---
HMEL030990g1.t1	actin
HMEL003998g1.t1	calcium-binding protein P-like
HMEL009417g1.t1	pupal cuticle protein-like
HMEL037608g1.t1	cuticle protein LPCP-23-like
HMEL013199g1.t1	phosphoenolpyruvate carboxykinase [GTP]-like isoform X1
HMEL015230g1.t1	seminal fluid protein CSSFP066
HMEL014926g2.t1	monocarboxylate transporter 3
HmOBP31	olfactory binding protein
HMEL013360-RA	protein spatzle 5
HMEL009672g1.t1	chitinase A-like
HMEL014774g1.t1	uncharacterized protein LOC113395164
HMEL022129g1.t1	uncharacterized protein LOC113394950
HMEL002519g1.t1	succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial

HMEL011066g2.t1	alpha-tocopherol transfer protein-like
HMEL010373g1.t1	uncharacterized LOC106113675 precursor
HMEL002880g1.t1	lysozyme-like
HMEL003835g1.t1	endocuticle structural glycoprotein SgAbd-1-like
HMEL013124g1.t1	facilitated trehalose transporter Tret1-like
HMEL003840g1.t1	neural/ectodermal development factor IMP-L2-like
HMEL007743g1.t1	dihydropyrimidine dehydrogenase [NADP(+)]
HMEL033459g1.t1	zinc finger DNA binding protein
HMEL031921g1.t1	larval cuticle protein 1-like
HMEL003757g2.t1	putative fatty acyl-CoA reductase CG5065
HMEL009569g1.t1	circadian clock-controlled protein-like
HMEL010636g1.t1	alpha-tocopherol transfer protein-like
HMEL007153g2.t1	fructose-1,6-bisphosphatase 1
HMEL007083g1.t1	Valacyclovir hydrolase
HMEL007991g2.t1	histidine-rich glycoprotein-like
HMEL004412g1.t1	uncharacterized protein LOC113401620
HMEL006304g1.t1	purine nucleoside phosphorylase-like isoform X1
HMEL011674g1.t1	Cuticle protein
HMEL034253g1.t1	uncharacterized LOC106121975 precursor
HMEL030772g1.t1	G-protein coupled receptor 64-like
HMEL007991g4.t1	cuticle protein 7-like
HMEL017189g1.t1	monocarboxylate transporter 12
HmelUGT40W2.mrna	UGT
HmCSP10	chemosensory protein
HMEL007565g1.t1	dual specificity protein phosphatase 14
HMEL038058g1.t2	probable glucosamine 6-phosphate N-acetyltransferase
HMEL007986g1.t1	pupal cuticle protein PCP52-like
HMEL004510g1.t1	cuticle protein 3-like
HMEL034900g1.t1	carotenoid isomeroxygenase-like
HMEL003719g1.t1	larval cuticle protein LCP-22-like
HmelGSTs6.mrna	-
HMEL004243g1.t2	Calcium-independent phospholipase A2-gamma
HmCSP28	chemosensory protein
HMEL036189g1.t1	conotoxin ArMKLT2-032-like
HMEL014094g1.t1	insulin-like receptor
HMEL034493g1.t1	Cytochrome b
HMEL036006g1.t1	protein unc-13 homolog C-like
HMEL006799g1.t1	protein 60A
HMEL016920g2.t1	lipoamide acyltransferase component of branched-chain alpha-keto acid dehydrogenase complex, mitochondrial
HMEL008727g1.t1	collagen alpha-1(IX) chain-like
HmCSP2	chemosensory protein
HMEL030106g1.t1	cuticle protein 7-like
HMEL032730g1.t1	insulin-like growth factor-binding protein complex acid labile subunit isoform X1

HMEL034795g1.t1	N-fatty-acyl-amino acid synthase/hydrolase PM20D1-like
HMEL005422g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL007739g1.t2	caskin-2 isoform X2
HMEL033041g1.t1	C-type lectin 27kD
HmCSP11	chemosensory protein
HMEL013901g1.t1	3-phosphoinositide-dependent protein kinase 1 isoform X1
HMEL030728g1.t1	LIX1-like protein
HMEL002558g1.t1	hypothetical protein KGM_203748
HMEL032412g1.t2	pleckstrin homology domain-containing family F member 2 isoform X2
HMEL012438g1.t1	zinc transporter ZIP10
HMEL010740g1.t1	C3 and PZP alpha-2-macroglobulin domain-containing protein 8
HMEL008645g1.t1	cuticle protein 19-like
HMEL017435g2.t1	retinol dehydrogenase 13-like
HMEL022261g3.t1	cAMP-specific 3,5-cyclic phosphodiesterase-like isoform X2
HMEL009791g1.t2	Protein PRRC2A
HMEL004916g1.t1	neuropathy target esterase sws isoform X3
HMEL014363g1.t1	zinc finger CCCH domain-containing protein 13 isoform X1
HMEL033193g1.t2	homeobox protein cut isoform X2
HMEL006689g1.t1	myrosinase 1-like
HMEL037321g1.t1	larval cuticle protein LCP-17-like
HMEL034272g1.t1	juvenile hormone binding protein an-0921 precursor
HMEL008976g1.t1	S-adenosylmethionine synthase isoform X1
HMEL012421g2.t1	---NA---
HMEL015977g1.t1	nucleoporin nup189-like
HMEL011232g1.t1	histidine decarboxylase
HMEL017044g1.t2	E3 ubiquitin-protein ligase HECW2 isoform X1
HMEL017127g1.t7	myosin heavy chain, muscle isoform X24
HMEL015313g3.t1	UNC93-like protein
HMEL010547g1.t1	UNC93-like protein
HMEL022333g1.t1	nose resistant to fluoxetine protein 6-like
HMEL033890g1.t1	reverse transcriptase

Upregulated genes in legs of *H. melpomene* five-day-old females

ID	Annotation
HMEL008770-RA	cytochrome P450 4C1-like
HMEL005377g1.t1	calreticulin
HMEL016763g1.t1	putative carbonic anhydrase 3
HMEL006610g3.t1	heat shock protein 90 cognate
HMEL003056g2.t1	lipase 3-like
HMEL005408g2.t1	elongation of very long chain fatty acids protein AAEL008004-like isoform X1
HMEL011723g1.t1	Hypothetical predicted protein
HMEL011226g1.t1	probable chitinase 2
HMEL011299g1.t2	uncharacterized protein LOC117994014 isoform X2
HMEL017507g1.t1	nose resistant to fluoxetine protein 6-like
HMEL013783g1.t1	uncharacterized protein LOC113394807

HMEL017252g1.t2	glycerol-3-phosphate dehydrogenase, mitochondrial isoform X2
HMEL003056g1.t1	gastric triacylglycerol lipase-like
HmelGSTd1.mrna	GST
HMEL009671g1.t1	putative protease inhibitor 4
HMEL005376g1.t1	D-arabinitol dehydrogenase 1-like
HMEL037963g1.t1	uncharacterized protein LOC113399326
HMEL014628g1.t1	alpha-tocopherol transfer protein-like
HMEL014531g3.t1	uncharacterized protein LOC112056399
HMEL014233g1.t1	venom protease-like
HMEL017127g1.t9	Myosin heavy chain, muscle
HMEL010169g1.t1	aldose reductase-like
HMEL000028-RA	mesencephalic astrocyte-derived neurotrophic factor homolog
HMEL031326g1.t1	---NA---
HMEL002202g1.t1	extensin-like isoform X2
HMEL008736g1.t1	far upstream element-binding protein 3 isoform X1
HMEL030086g1.t1	prostamide/prostaglandin F synthase-like isoform X1
HMEL004430g1.t1	GILT-like protein 1 isoform X2
HMEL005109g1.t1	cadherin-23
HMEL032659g1.t1	macrophage mannose receptor 1-like
HMEL032434g1.t1	hypothetical protein KGM_208333
HMEL017601g1.t2	SWI/SNF complex subunit SMARCC2 isoform X1
HMEL031247g1.t1	Heat shock 70 kDa protein cognate 3
HMEL016262g1.t1	inositol-3-phosphate synthase
HMEL005392g3.t1	RNA exonuclease 4
HMEL034126g1.t1	uncharacterized protein LOC112053984
HMEL033323g1.t1	alpha-tocopherol transfer protein-like
HMEL013164g1.t1	facilitated trehalose transporter Tret1-like
HMEL037600g1.t1	transmembrane protein 209-like
HMEL030510g1.t1	disks large-associated protein 5 isoform X2
HMEL009106-RA	transcription factor kayak isoform X3
HMEL005773g1.t1	pollen-specific leucine-rich repeat extensin-like protein 1
HMEL034521g1.t1	unnamed protein product
HMEL006793g1.t1	sodium/hydrogen exchanger 9B2-like isoform X1
HMEL011561g1.t1	uncharacterized LOC106109504 precursor
HMEL035526g1.t1	peptide transporter family 1 isoform X1
HMEL013672g1.t1	juvenile hormone epoxide hydrolase-like
HMEL016787g1.t2	pollen-specific leucine-rich repeat extensin-like protein 3 isoform X1
HMEL003326g2.t1	esterase FE4-like
HMEL014519-RA	sensory neuron membrane protein 2
HMEL037992g1.t1	senecionine N-oxygenase-like
HMEL012546g3.t1	sulfotransferase 1C4-like
HMEL036865g1.t1	protein msta-like isoform X1
HMEL006610g1.t1	endoplasmic isoform X1
HMEL014225g1.t1	protein phosphatase 1 regulatory subunit 3C

HMEL034898g1.t1	carotenoid isomeroxygenase-like
HMEL032503g1.t1	tctex1 domain-containing protein 1-A-like
HMEL017304g1.t1	seminal fluid protein HACP059
HMEL009950g1.t1	---NA---
HMEL002378g1.t1	serine protease inhibitor dipetalogastin-like
HMEL013064g1.t1	serine protease snake-like
HMEL015404g1.t1	la1-like protein 15 isoform X4
HMEL000006-RA	trehalase 1a
HMEL010126g1.t3	seminal fluid protein HACP059
HMEL036519g1.t1	---NA---
HMEL015861g1.t1	pupal cuticle protein PCP52-like
HMEL006016g1.t1	endocuticle structural glycoprotein ABD-5-like
HMEL035136g1.t1	sodium-coupled monocarboxylate transporter 1
HMEL015278g1.t1	pancreatic triacylglycerol lipase-like
HMEL010228-RA	general odorant-binding protein 19d-like
HmOBP11	olfactory binding protein
HMEL006231g1.t1	very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase hpo-8
HMEL013136g4.t1	myrosinase 1-like
HMEL031826g1.t1	protein FAM13A-like isoform X2
HMEL037131g1.t2	angiotensin-converting enzyme-like isoform X3
HMEL010126g1.t2	seminal fluid protein HACP059
HmelUGT46E1.mrna	UGT
HMEL009597g1.t1	seminal fluid protein HACP057
HMEL014492g1.t1	phospholipase A1-like
HMEL010062g1.t1	potassium channel subfamily K member 1-like isoform X1
HMEL013943g1.t1	pre-mRNA-splicing factor ATP-dependent RNA helicase PRP16
HMEL032052g1.t1	cuticular protein RR-3 motif 148 precursor
HMEL005973g1.t1	facilitated trehalose transporter Tret1-like
HMEL033367g1.t1	uncharacterized protein LOC113396892
HMEL020720g1.t1	cuticular protein RR-2 motif 125 precursor
HMEL003326g3.t1	esterase FE4-like
HMEL030103g1.t1	ommochrome-binding protein-like
HMEL003479g2.t1	---NA---
HmelUGT33X2.mrna	UGT
HMEL017148-RA	cytochrome P450 4c3-like
HMEL009951g1.t1	---NA---
HMEL003562g1.t2	phosphorylase b kinase gamma catalytic chain, liver/testis isoform isoform X2
HMEL014615g2.t1	methyltransferase-like protein 23
HMEL003561g3.t1	Ribonuclease H-like domain
HMEL017233g1.t1	Krueppel homolog 1-like
HMEL013158g1.t1	facilitated trehalose transporter Tret1-like
HMEL011374g1.t1	venom acid phosphatase Acph-1-like
HMEL018084g1.t1	allergen Api m 6-like
HMEL004446g1.t1	uncharacterized protein LOC116768575

HmelUGT33X1.mrna	UGT
HMEL014782g1.t1	protein takeout-like
HMEL013159g1.t1	facilitated trehalose transporter Tret1-like
HMEL017149-RA	Cytochrome P450 4V2
HMEL014821g1.t2	aldose reductase-like isoform X2
HMEL008541g1.t1	protein app1-like
HMEL005596-RA	ejaculatory bulb-specific protein 3-like
HMEL011196g1.t1	cuticle protein 1-like
HMEL003661g1.t1	---NA---
HMEL011197g2.t1	cuticle protein 1-like
HmOBP50	olfactory binding protein
HMEL011197g1.t1	cuticle protein 1

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ID	Annotation
HMEL031924g1.t1	endocuticle structural glycoprotein SgAbd-8-like
HMEL006020g1.t1	protein lethal(3)malignant blood neoplasm 1
HMEL011701g1.t1	cuticle protein 16.5-like
HMEL031921g1.t1	larval cuticle protein 1-like
HMEL011699g1.t1	uncharacterized protein LOC113394755
HMEL031920g1.t1	larval cuticle protein 1-like
HMEL031927g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL031922g1.t1	larval cuticle protein 1-like
HMEL011715g1.t1	---NA---
HMEL007003g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL032516g1.t1	---NA---
HMEL003670g1.t1	pupal cuticle protein G1A-like
HMEL003671g1.t1	putative cuticle protein
HMEL014783g1.t1	circadian clock-controlled protein-like
HMEL007002g1.t1	larval cuticle protein 1-like
HMEL017436g1.t1	cuticular protein glycine-rich 20
HMEL004412g1.t1	uncharacterized protein LOC113401620
HMEL032926g1.t1	senecionine N-oxygenase isoform X1
HMEL014632g1.t1	endochitinase-like isoform X2
HMEL016976g1.t1	mycosubtilin synthase subunit C
HMEL009417g1.t1	pupal cuticle protein-like
HMEL003835g1.t1	endocuticle structural glycoprotein SgAbd-1-like
HMEL036512g1.t1	organic cation transporter protein-like
HMEL009569g1.t1	circadian clock-controlled protein-like
HMEL007536g1.t1	uncharacterized peptidase C1-like protein F26E4.3
HMEL030106g1.t1	cuticle protein 7-like
HMEL010636g1.t1	alpha-tocopherol transfer protein-like
HMEL013199g1.t1	phosphoenolpyruvate carboxykinase [GTP]-like isoform X1
HmOBP31	olfactory binding protein
HMEL008859g1.t1	calcium-binding protein P-like

HMEL002552g1.t1	cuticle protein CP14.6-like
HMEL006740g3.t1	---NA---
HMEL033281g1.t1	pickpocket protein 28-like
HMEL011924g1.t1	uncharacterized protein LOC114362364
HMEL016408g1.t1	C-type lectin 4 precursor
HMEL013247g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL032062g1.t1	basic proline-rich protein isoform X1
HMEL012299g1.t1	troponin C-like isoform X1
HMEL015804g1.t1	larval/pupal rigid cuticle protein 66-like
HMEL036076g1.t5	protein held out wings isoform X1
HMEL002383g1.t1	craniofacial development protein 2-like
HMEL006689g1.t1	myrosinase 1-like
HMEL014926g2.t1	monocarboxylate transporter 3
HMEL030990g1.t1	actin
HMEL010010g1.t1	ecdysone-induced protein 74EF isoform X1
HMEL005422g1.t1	endocuticle structural glycoprotein ABD-4-like
HMEL003074g1.t1	global transcription regulator sge1
HMEL007950g1.t1	esterase FE4-like
HMEL005816g1.t1	uncharacterized protein LOC117987429 isoform X2
HMEL002880g1.t1	lysozyme-like
HMEL002212g1.t1	chitin synthase chs-2 isoform X3
HMEL006811g1.t1	chitin deacetylase 2
HMEL037608g1.t1	cuticle protein LPCP-23-like
HMEL020967g1.t1	probable chitinase 10
HMEL009297g1.t1	skin secretory protein xP2-like
HMEL032446g1.t1	hypothetical protein B5V51_9188
HMEL007991g7.t1	cuticle protein 8-like
HMEL010373g1.t1	uncharacterized LOC106113675 precursor
HMEL009298g2.t1	pollen-specific leucine-rich repeat extensin-like protein 2
HMEL006811g1.t3	chitin binding protein
HMEL012523g1.t1	troponin C-like
HMEL003719g1.t1	larval cuticle protein LCP-22-like
HMEL032824g1.t1	heme peroxidase 2
HMEL007136g1.t1	cuticle protein 1-like
HMEL010805g3.t1	leishmanolysin-like peptidase isoform X2
HMEL011805g1.t1	---NA---
HMEL010106g1.t1	pancreatic lipase-related protein 2
HMEL012685g1.t1	uncharacterized LOC106108503 precursor
HMEL002008g1.t1	probable chitinase 10
HMEL004893g1.t1	adhesive plaque matrix protein-like isoform X1
HMEL030866g1.t1	myrosinase 1-like
HMEL007285g1.t1	golgin subfamily A member 6-like protein 22
HMEL021415g1.t1	endocuticle structural glycoprotein SgAbd-5-like
HMEL008325g1.t1	5-AMP-activated protein kinase catalytic subunit alpha-2 isoform X2

HMEL006011g1.t1	endocuticle structural protein SgAbd-6-like
HMEL010976g1.t1	pollen-specific leucine-rich repeat extensin-like protein 1
HMEL013908g2.t1	cuticular protein CPH
HmCSP10	chemosensory protein
HMEL003666g1.t1	cuticle protein 16.5-like
HMEL033509g1.t1	serine proteinase stubble
HMEL033982g1.t1	proton-coupled amino acid transporter-like protein pathetic
HMEL032797g1.t1	heme peroxidase 2
HMEL016396g1.t1	phospholipase A2 like protein
HMEL008727g1.t1	collagen alpha-1(IX) chain-like
HMEL021946g1.t2	UNC93-like protein MFSD11
HMEL034179g1.t1	---NA---
HMEL015878g1.t1	substance-K receptor-like isoform X1
HMEL006017g2.t1	flexible cuticle protein 12-like
HMEL021221g1.t1	yellow-c
HMEL016977g1.t2	epsilon-sarcoglycan isoform X1
HmCSP25	chemosensory protein
HMEL014104g1.t1	uncharacterized protein LOC113401956 isoform X5
HMEL002519g1.t1	succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial
HMEL009296g1.t1	activating signal cointegrator 1 complex subunit 2 homolog
HMEL033041g1.t1	C-type lectin 27kD
HMEL007134g1.t1	pupal cuticle protein PCP52-like
HMEL033978g1.t1	serine-rich adhesin for platelets-like isoform X1
HMEL007986g1.t1	pupal cuticle protein PCP52-like
HMEL036941g1.t1	terminal nucleotidyltransferase 5C isoform X2
HMEL007667g2.t1	uncharacterized protein LOC114365618
HMEL010460g1.t1	glucose dehydrogenase [FAD, quinone]-like
HMEL036393g1.t1	alpha-tocopherol transfer protein-like
HMEL031257g1.t1	ecdysone-induced protein 74EF isoform X3
HMEL006811g2.t1	chitin deacetylase 1
HMEL011227g1.t1	cuticular protein analogous to peritrophins 1-D precursor
HMEL035331g1.t1	uncharacterized LOC106124743 precursor
HMEL004083g1.t1	simila to CG13188
HMEL009320g1.t1	LIM and SH3 domain protein Lasp isoform X1
HMEL034253g1.t1	uncharacterized LOC106121975 precursor
HMEL012064g1.t3	basement membrane-specific heparan sulfate proteoglycan core protein isoform X4
HMEL010633g1.t1	alpha-tocopherol transfer protein-like
HMEL004083g2.t1	uncharacterized protein LOC116779101 isoform X3
HMEL014555g1.t1	monocarboxylate transporter 10-like isoform X1
HMEL013907g1.t1	cuticle protein 16.5-like
HMEL031741g1.t1	---NA---
HMEL012669g1.t2	Rho guanine nucleotide exchange factor 10
HMEL015313g3.t1	UNC93-like protein
HMEL008833g1.t1	alpha-actinin, sarcomeric isoform X1

HMEL009672g1.t1 chitinase A-like
 HMEL035254g1.t2 paxillin isoform X1
 HMEL008353g1.t2 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1
 HMEL005192g1.t1 defense protein 2
 HMEL033108g1.t1 putative inactive cysteine synthase 2
 HMEL009232g1.t1 fructose-bisphosphate aldolase-like
 HMEL008837g1.t1 probable 4-coumarate--CoA ligase 1
 HMEL014452g1.t1 annexin B9 isoform X3
 HMEL003999g1.t1 hypothetical protein KGM_211381
 HMEL017189g1.t1 monocarboxylate transporter 12
 HMEL005468g1.t1 uncharacterized LOC106124634 precursor
 HMEL003976g1.t1 flightin isoform X1
 HMEL002505g1.t2 inactive dipeptidyl peptidase 10
 HMEL032592g1.t1 pupal cuticle protein 36-like
 HMEL030296g1.t1 endonuclease-reverse transcriptase HmRTE-e01
 HMEL004744g1.t1 uncharacterized protein LOC112047711 isoform X1
 HMEL016032g1.t1 aquaporin-11 isoform X2
 HMEL017029g1.t1 hemocytin
 HMEL002569g1.t1 monocarboxylate transporter 10-like isoform X2
 HMEL014952g1.t1 flocculation protein FLO11-like
 HMEL031928g1.t1 endocuticle structural glycoprotein SgAbd-2-like
 HMEL008353g1.t1 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1
 HMEL017127g1.t7 myosin heavy chain, muscle isoform X24
 HMEL003979g1.t3 period circadian protein isoform X8
 HMEL033459g1.t1 zinc finger DNA binding protein
 HMEL013662g1.t1 uncharacterized protein LOC113397681
 HMEL017435g2.t1 retinol dehydrogenase 13-like
 HmelUGT45B1.mrna UGT
 HMEL012304g1.t1 myofilin variant A
 HMEL005235g1.t1 G1/S-specific cyclin-D2-like
 HMEL006796g1.t1 sodium/hydrogen exchanger 9B2-like isoform X3
 HMEL016123g1.t1 proteoglycan 4-like
 HMEL034906g1.t1 endonuclease-reverse transcriptase HmRTE-e01
 HMEL032307g1.t2 ran-binding protein 9 isoform X2
 HMEL016093g1.t1 neurogenic locus notch homolog protein 1
 HMEL015501g1.t1 mucin-17 isoform X1
 HMEL014040g1.t1 putative eukaryotic translation initiation factor 3 theta subunit
 HMEL030658g1.t1 venom protease-like
 HMEL014531g1.t1 GTP cyclohydrolase 1 isoform X1
 HMEL017820g1.t1 thrombospondin type-1 domain-containing protein 4-like
 HMEL030607g1.t1 simila to CG34115
 HMEL032904g1.t1 ---NA---
 HMEL031058g1.t2 nuclear receptor coactivator 7 isoform X1
 HMEL008822g2.t1 myosin-1 precursor

HMEL034877g1.t1 ---NA---
 HMEL002212g1.t2 chitin synthase A
 HMEL017090g2.t1 N-myc downstream regulated
 HMEL014491g1.t1 carbonyl reductase [NADPH] 1-like
 HMEL007565g1.t1 dual specificity protein phosphatase 14
 HMEL017090g1.t1 N-myc downstream regulated
 HMEL037224g1.t1 solute carrier family 2, facilitated glucose transporter member 1-like
 HMEL012765-RA cryptochrome-1
 HMEL032184g1.t1 alpha-N-acetylgalactosaminidase isoform X2
 HMEL005230g1.t1 acyl-CoA Delta(11) desaturase-like
 HMEL034812g1.t1 uridine phosphorylase 1 isoform X1
 HMEL025038g2.t2 voltage-gated potassium channel subunit beta-2 isoform X5
 HMEL007254g1.t1 prisilkin-39-like
 HMEL010344g1.t2 protein obstructor-E isoform X2
 HMEL012251g1.t1 uncharacterized protein LOC117991081
 HMEL008722g5.t1 ---NA---
 HMEL003987g1.t1 mucin-5AC
 HMEL033739g1.t1 nephrin-like isoform X1
 HMEL033819g1.t1 pericentriolar material 1 protein-like isoform X1
 HMEL017189g2.t1 ---NA---
 HMEL003238g1.t1 fibulin-2-like isoform X1
 HMEL005861g5.t1 proton-coupled amino acid transporter-like protein CG1139
 HMEL030675g1.t1 chymotrypsin-like elastase family member 2A
 HMEL006799g1.t1 protein 60A
 HMEL013901g1.t1 3-phosphoinositide-dependent protein kinase 1 isoform X1
 HMEL013657g1.t1 LHFPL tetraspan subfamily member 3 protein
 HMEL005738g1.t1 cuticle protein 8-like
 HMEL008565g3.t1 protein Skeletor, isoforms B/C isoform X3
 HMEL034795g1.t1 N-fatty-acyl-amino acid synthase/hydrolase PM20D1-like
 HMEL009791g1.t2 Protein PRRC2A
 HMEL016701g1.t1 TWiK family of potassium channels protein 9-like
 HMEL010346g1.t1 protein obstructor-E-like
 HMEL037996g1.t1 nose resistant to fluoxetine protein 6-like
 HMEL030728g1.t1 LIX1-like protein
 HMEL008565g1.t1 protein Skeletor, isoforms D/E-like
 HMEL002369g1.t1 nose resistant to fluoxetine protein 6-like
 HMEL010735g1.t1 BCL2/adenovirus E1B 19 kDa protein-interacting protein 3 isoform X2
 HMEL037664g1.t1 protein extra-macrochaetae
 HMEL002924g1.t1 actin cytoskeleton-regulatory complex protein PAN1-like
 HMEL034453g1.t2 plasma membrane calcium-transporting ATPase 2 isoform X1
 HMEL016782g2.t1 alanine--glyoxylate aminotransferase 2-like
 HMEL008352g1.t1 PI-PLC X domain-containing protein 3 isoform X2
 HMEL013908g1.t1 cuticular protein CPH
 HMEL011768g1.t1 uncharacterized protein LOC113392929

HMEL015709g1.t1	bromodomain-containing protein DDB_G0280777-like
HMEL013974g1.t1	Phage tape measure minor tail protein
HMEL017841g1.t1	uncharacterized protein LOC112058059 isoform X2
HMEL005325g2.t1	bifunctional heparan sulfate N-deacetylase/N-sulfotransferase
HMEL020280g1.t1	alpha-N-acetylgalactosaminidase isoform X1
HMEL034493g1.t1	Cytochrome b
HMEL006003g1.t1	putative cuticle protein
HMEL004514g1.t1	uncharacterized protein LOC113393602 isoform X1
HMEL034424g1.t1	facilitated trehalose transporter Tret1-2 homolog
HMEL037388g1.t1	probable serine/threonine-protein kinase DDB_G0278901
HMEL006404g1.t1	apoptosis-stimulating of p53 protein 1 isoform X3
HMEL009165g1.t1	uncharacterized protein LOC113398198 isoform X2
HMEL002923g1.t1	uncharacterized protein LOC113401355 isoform X1
HMEL010947g1.t1	23 kDa integral membrane protein-like
HMEL003998g1.t1	calcium-binding protein P-like
HMEL032882g1.t1	putative K06A9.1b
HMEL003233g1.t1	superoxide dismutase 6
HmelGSTd2.mrna	GST
HMEL037252g1.t1	uncharacterized protein LOC112049536 isoform X2
HMEL014689g1.t2	protein sickie isoform X1
HMEL008985g1.t2	FK506-binding protein 5 isoform X4
HMEL013202g1.t1	WAP, Kazal, immunoglobulin, Kunitz and NTR domain-containing protein
HMEL009462g2.t1	E3 ubiquitin-protein ligase HECW2
HMEL002199g1.t1	probable serine/threonine-protein kinase kinX isoform X1
HMEL010221g1.t1	tubulin-specific chaperone cofactor E-like protein
HMEL032128g1.t1	myosin light chain kinase, smooth muscle-like
HMEL036492g1.t1	tropomyosin-2 isoform X5
HMEL035856g1.t1	---NA---
HMEL007353g1.t1	troponin I isoform X10
HMEL030862g1.t1	C-C chemokine receptor type 7-like
HMEL012421g1.t1	ubiquitin-conjugating enzyme E2Q-like protein CG4502
HMEL031933g1.t1	endocuticle structural glycoprotein ABD-5-like
HMEL002124g1.t1	fatty acid-binding protein, muscle-like
HMEL005413g1.t1	chitin deacetylase 4
HMEL008976g1.t1	S-adenosylmethionine synthase isoform X1
HMEL009482g1.t1	larval cuticle protein A2B-like
HMEL034496g1.t1	filamin-A isoform X1
HMEL007083g1.t1	Valacyclovir hydrolase
HMEL016221g2.t1	organic cation transporter protein-like
HMEL036794g1.t1	reversion-inducing cysteine-rich protein with Kazal motifs
HMEL036164g1.t1	tetraspanin-5 isoform X1
HMEL011747g1.t1	aquaporin AQP Ae.a
HMEL011207g1.t1	uridine phosphorylase 1-like
HMEL009009g1.t2	zinc transporter 2-like isoform X1

HMEL008258g1.t1	cysteine sulfinic acid decarboxylase
HMEL011826g1.t1	sarcoplasmic calcium-binding protein 1 isoform X1
HMEL013806g1.t1	chromobox protein homolog 1-like
HMEL032702g1.t3	uncharacterized LOC106119066
HMEL035298g1.t1	ester hydrolase C11orf54 homolog isoform X1
HMEL005948g1.t1	putative PDZ domain containing 3
HMEL003663g1.t1	---NA---
HMEL012250g1.t1	uncharacterized oxidoreductase TM_0325-like
HMEL006296g1.t1	neutral ceramidase
HMEL020979g1.t2	probable ribonuclease ZC3H12B isoform X2
HMEL034200g1.t1	thymosin beta isoform X2
HMEL034328g1.t1	organic cation transporter-like protein
HMEL009383g1.t1	cysteine-rich venom protein TEL1-like
HMEL017127g1.t6	myosin heavy chain, muscle isoform X5
HMEL007151g1.t3	Tropomyosin-1, isoforms 9A/A/B
HMEL032821g1.t2	cytohesin-1 isoform X1
HMEL006578g1.t1	unnamed protein product
HMEL015582g1.t1	monocarboxylate transporter 13 isoform X1
HMEL013913g1.t1	ras association domain-containing protein 10
HMEL009440g1.t2	E3 ubiquitin-protein ligase TRIM37-like

Upregulated genes in mouthparts of *H. melpomene* five-day-old females

ID	Annotation
HMEL030925g1.t1	protein disulfide-isomerase A6 homolog
HMEL030086g1.t1	prostamide/prostaglandin F synthase-like isoform X1
HMEL012378g1.t1	coiled-coil domain-containing protein 43
HMEL032678g1.t1	putative ATP-binding protein
HMEL006639g3.t1	2-iminobutanoate/2-iminopropanoate deaminase-like
HMEL015724g1.t1	acyl-CoA Delta(11) desaturase
HMEL031754g1.t1	uncharacterized protein LOC115446869
HMEL005817g1.t1	---NA---
HMEL036612g1.t1	RNA-binding protein lark
HMEL014926g1.t1	dehydrodolichyl diphosphate synthase complex subunit Nus1
HMEL002378g1.t1	serine protease inhibitor dipetalogastin-like
HMEL005349g1.t1	uncharacterized protein LOC113401228
HMEL006553g1.t1	zinc finger protein GLIS2-like
HMEL000006-RA	trehalase 1a
HMEL004443g2.t1	ecdysteroid 22-kinase
HMEL004986g1.t1	---NA---
HMEL013596g1.t1	peptidyl-prolyl cis-trans isomerase FKBP2
HMEL017402g1.t1	uncharacterized protein LOC113401483
HMEL031234g1.t1	RNA-binding protein 1 isoform X1
HMEL009425g1.t1	peptidoglycan-recognition protein LB-like
HMEL031453g1.t1	rhopilin-2 isoform X1
HMEL013943g1.t1	pre-mRNA-splicing factor ATP-dependent RNA helicase PRP16

HMEL033780g1.t1	epoxide hydrolase 4-like
HmelUGT40V1.mrna	UGT
HMEL010483g1.t1	protein lethal(2)essential for life-like
HMEL010228-RA	general odorant-binding protein 19d-like
HMEL010624g1.t1	glycine-rich cell wall structural protein-like isoform X2
HMEL012929g1.t1	transmembrane protein 258
HMEL018123-RA	allergen Tha p 1-like
HMEL010805g3.t2	leishmanolysin-like peptidase isoform X2
HMEL006610g1.t1	endoplasmic isoform X1
HMEL006610g3.t1	heat shock protein 90 cognate
HMEL005377g1.t1	calreticulin
HMEL013783g1.t1	uncharacterized protein LOC113394807
HMEL033930g1.t1	tenascin-like isoform X1
HMEL016024g1.t1	lysozyme 2-like
HMEL016136g1.t1	protein seele
HMEL016743g1.t1	cathepsin B
HMEL034417g1.t1	hypothetical protein RR46_02196
HMEL005364g1.t1	cytochrome b5-related protein-like
HMEL033819g1.t2	pericentriolar material 1 protein-like isoform X2
HMEL033248g1.t1	15-hydroxyprostaglandin dehydrogenase [NAD(+)]-like
HMEL006116g2.t1	clavesin-1
HMEL031782g1.t1	elongation of very long chain fatty acids protein 6
HMEL016058g1.t1	seminal fluid protein HACP044
HMEL014782g1.t1	protein takeout-like
HMEL031247g1.t1	Heat shock 70 kDa protein cognate 3
HMEL005451g1.t1	hydroxymethylglutaryl-CoA synthase 1
HMEL017233g1.t1	Krueppel homolog 1-like
HMEL033305g1.t1	endoplasmic reticulum resident protein 29
HMEL033367g1.t1	uncharacterized protein LOC113396892
HMEL015278g1.t1	pancreatic triacylglycerol lipase-like
HMEL006853g1.t1	alpha-tocopherol transfer protein-like
HMEL013160g1.t1	facilitated trehalose transporter Tret1-like
HMEL006231g1.t1	very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase hpo-8
HMEL016050g1.t1	seminal fluid protein HACP044
HmOBP18	olfactory binding protein
HMEL013887g1.t1	putative fatty acyl-CoA reductase CG5065
HMEL009950g1.t1	---NA---
HMEL016237g1.t1	circadian clock-controlled protein-like
HMEL011374g1.t1	venom acid phosphatase Acph-1-like
HMEL005392g3.t1	RNA exonuclease 4
HMEL031991g1.t1	cytochrome P450 4c3-like
HmCSP23	chemosensory protein
HmelUGT33X2.mrna	UGT
HMEL006217g1.t1	cocoonase 4

HMEL005701g1.t1	---NA---
HMEL016051g1.t1	seminal fluid protein HACP044
HMEL010953g3.t1	superoxide dismutase [Cu-Zn]-like
HMEL020720g1.t1	cuticular protein RR-2 motif 125 precursor
HMEL036651g1.t1	seminal fluid protein HACP044
HMEL003599g1.t1	circadian clock-controlled protein-like
HMEL014821g1.t2	aldose reductase-like isoform X2
HMEL004963g1.t1	---NA---
HMEL022638g5.t1	pancreatic lipase-related protein 2-like
HMEL022638g4.t1	pancreatic lipase-related protein 2-like
HMEL011197g2.t1	cuticle protein 1-like
HMEL013743g1.t1	15-hydroxyprostaglandin dehydrogenase [NAD(+)]-like
HMEL036388g1.t1	pancreatic lipase-related protein 2-like
HMEL011197g1.t1	cuticle protein 1
HmelUGT33X1.mrna	UGT
HMEL002554g1.t1	hypothetical protein B5X24_HaOG204795

Supplementary Table 10. Gene annotation of upregulated genes when comparing female and male antenna, leg, and mouthpart tissues in *H. cydno*.

Upregulated genes in antennae of <i>H. cydno</i> females	
ID	Annotation
HMEL030967g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL031425g1.t1	reverse transcriptase
HMEL006748g1.t1	odorant binding protein
HMEL037919g1.t1	uncharacterized protein LOC117989496
HMEL003132g1.t2	homeodomain-interacting protein kinase 2 isoform X1
HmOBP52	olfactory binding protein
HMEL005900g1.t1	phospholipase ABHD3
HMEL037464g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL009627g2.t1	fibrinogen silencer-binding protein-like
HMEL012617g2.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL011715g1.t1	---NA---
HMEL022241g1.t1	fibrinogen silencer-binding protein-like
HMEL013052g1.t1	mitochondrial 2-oxoglutarate/malate carrier protein-like
HMEL015808g1.t1	cuticle protein 19.8-like
HMEL008898g2.t1	retinal dehydrogenase 1-like
HMEL017779g1.t2	endonuclease-reverse transcriptase HmRTE-e01
HMEL015174g1.t2	E3 ubiquitin-protein ligase UBR5 isoform X4
HMEL011210g1.t2	protein CDV3 homolog
HMEL006560g2.t1	kynurenine formamidase isoform X2
HMEL036861g1.t1	hypothetical protein evm_011137
HmelGSTs2.mrna	GST
HMEL010801g3.t1	Probable RNA-directed DNA polymerase from transposon X-element
HMEL034236g1.t1	reverse transcriptase
HMEL004422g1.t1	synapse-associated protein of 47 kDa isoform X2
HMEL020420g2.t1	RNA-directed DNA polymerase from mobile element jockey
HmOr5	olfactory receptor
HMEL015393g1.t1	venom allergen 5-like
HMEL013444g1.t1	zinc finger protein 33B-like
HMEL032637g1.t1	hypothetical protein B5V51_2590
HMEL008087g2.t1	KRAB-A domain-containing protein 2-like
HMEL005852g1.t1	solute carrier family 41 member 1-like isoform X1
HMEL016273g1.t2	espin isoform X1
HMEL031240g1.t1	xin actin-binding repeat-containing protein 2 isoform X1
HMEL008250g1.t1	ribonucleoside-diphosphate reductase large chain-like
HMEL034121g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL010190g3.t1	glucose dehydrogenase [FAD, quinone]
HMEL035917g1.t1	hypothetical protein evm_013800, partial
HMEL010658g1.t1	uncharacterized protein LOC113398111 isoform X2
HMEL010190g2.t1	glucose dehydrogenase [FAD, quinone]
HMEL017144g1.t2	Pancreatic lipase-related protein 1

HMEL017092g1.t1	esterase B1-like
HMEL014190g1.t1	ATP-dependent RNA helicase glh-1-like
HMEL010189g1.t1	glucose dehydrogenase [FAD, quinone]
HMEL009816g1.t1	BTB/POZ domain-containing protein KCTD1
HMEL006560g1.t1	kynurenine formamidase isoform X2
HMEL002212g1.t2	chitin synthase A
HMEL013444g2.t1	zinc finger protein 37 homolog
HMEL004850g2.t1	dopamine N-acetyltransferase-like
HMEL008902g1.t1	PHD finger protein 14 isoform X1
HMEL007679g1.t1	Heterogeneous nuclear ribonucleoprotein K
HMEL030660g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X2
HmelGSTs10.mrna	GST
HmOBP16	olfactory binding protein
HMEL017139g2.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL036825g1.t1	slowpoke-binding protein
HMEL035792g1.t1	Endonuclease-reverse transcriptase
HMEL013527g1.t2	calpain-C isoform X1
HMEL014531g5.t1	uncharacterized protein LOC113392023

Upregulated genes in antennae of *H. cydno* males

ID	Annotation
HMEL015230g1.t1	seminal fluid protein CSSFP066
HMEL017165g1.t2	myb protein isoform X2
HMEL022129g1.t2	uncharacterized protein LOC113394950
HMEL036487g1.t1	aldehyde dehydrogenase, mitochondrial
HMEL020557g3.t1	lipopolysaccharide-induced tumor necrosis factor-alpha factor homolog
HMEL005501g1.t1	---NA---
HMEL038071g1.t1	PREDICTED: uncharacterized protein LOC106721535
HMEL003625g1.t1	AGAP009955-PA-like protein
HMEL006118g1.t1	---NA---
HMEL033670g1.t1	hypothetical protein KGM_205462
HMEL033263g1.t1	glucose dehydrogenase [FAD, quinone]-like
HMEL010199g1.t2	ubiquitin-conjugating enzyme E2 G1
HMEL004081g1.t3	kinesin-like protein KIF13B isoform X6
HMEL002971g2.t1	calpain-A-like isoform X2
HMEL035526g1.t1	peptide transporter family 1 isoform X1
HMEL008320g2.t1	protein PFC0760c-like
HMEL004422g1.t3	synapse-associated protein of 47 kDa isoform X4
HMEL030213g1.t1	alpha-tocopherol transfer protein-like isoform X2
HMEL033668g1.t1	lysosomal-associated transmembrane protein 4A-like
HMEL036603g1.t1	uncharacterized protein LOC110384334
HMEL036439g1.t1	tigger transposable element-derived protein 4-like
HMEL036651g1.t1	seminal fluid protein HACP044
HmOr59	olfactory receptor
HMEL011184g1.t1	RYamide neuropeptides-like

HmOr11 olfactory receptor
HmOr43 olfactory receptor

Upregulated genes in legs of *H. cydno* females

ID	Annotation
HMEL030967g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL034733g1.t1	odorant binding protein
HMEL031425g1.t1	reverse transcriptase
HMEL037919g1.t1	uncharacterized protein LOC117989496
HMEL005900g1.t1	phospholipase ABHD3
HMEL012617g2.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL006576g1.t2	early endosome antigen 1
HMEL013052g1.t1	mitochondrial 2-oxoglutarate/malate carrier protein-like
HMEL037464g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HmelGSTs2.mrna	-
HMEL022604-RA	UDP-glucuronosyltransferase 2B15-like isoform X2
HMEL010624g1.t1	glycine-rich cell wall structural protein-like isoform X2
HMEL022241g1.t1	fibrinogen silencer-binding protein-like
HMEL036861g1.t1	hypothetical protein evm_011137
HMEL035792g1.t1	Endonuclease-reverse transcriptase
HMEL009627g2.t1	fibrinogen silencer-binding protein-like
HMEL030564g1.t1	Microprocessor complex subunit DGCR8
HMEL015808g1.t1	cuticle protein 19.8-like
HMEL007404g1.t1	transmembrane protein 53-like
HMEL013444g1.t1	zinc finger protein 33B-like
HmelUGT33AA2.mrna	UGT
HMEL016088g1.t1	spermine oxidase-like
HMEL030660g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X2
HmelGSTs10.mrna	GST
HMEL006748g1.t1	odorant binding protein
HMEL009816g1.t1	BTB/POZ domain-containing protein KCTD1
HMEL013527g1.t1	calpain-C isoform X1
HMEL035524g1.t2	ankyrin repeat domain-containing protein 11 isoform X2
HMEL012250g1.t1	uncharacterized oxidoreductase TM_0325-like
HMEL011924g1.t1	uncharacterized protein LOC114362364
HMEL020420g2.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL030995g1.t1	uncharacterized protein LOC116768575
HMEL006341-RA	scavenger receptor class B member 1-like isoform X1
HMEL008087g2.t1	KRAB-A domain-containing protein 2-like
HMEL003156g1.t1	alpha-tocopherol transfer protein-like
HMEL032637g1.t1	hypothetical protein B5V51_2590
HMEL003179g1.t1	---NA---
HMEL010801g3.t1	Probable RNA-directed DNA polymerase from transposon X-element
HMEL021415g1.t1	endocuticle structural glycoprotein SgAbd-5-like
HMEL008564g1.t1	peptide methionine sulfoxide reductase

HMEL008564g1.t2	peptide methionine sulfoxide reductase
HMEL011561g1.t1	uncharacterized LOC106109504 precursor
HMEL011017g1.t1	amino acid transporter AVT1D-like
HMEL008039g1.t1	solute carrier family 25 member 40-like isoform X1
HMEL030047g1.t1	EF-hand calcium-binding domain-containing protein 2 isoform X1
HMEL006014g1.t1	endocuticle structural glycoprotein SgAbd-5-like
HMEL030601g1.t1	uncharacterized protein LOC112048264
Upregulated genes in legs of <i>H. cydno</i> males	
ID	Annotation
HMEL020557g2.t1	lipopolysaccharide-induced tumor necrosis factor-alpha factor homolog
HMEL006484g1.t1	ankyrin-3-like isoform X2
HMEL006576g1.t1	early endosome antigen 1
HMEL002505g1.t1	inactive dipeptidyl peptidase 10
HMEL004713g3.t1	methyltransferase-like protein 13
HMEL003068g1.t2	uncharacterized protein LOC113400921 isoform X2
HMEL014817g2.t2	double-stranded RNA-specific editase Adar isoform X1
HMEL013638g1.t1	flocculation protein FLO11
HMEL031464g1.t1	pancreatic triacylglycerol lipase-like
HMEL014452g1.t1	annexin B9 isoform X3
HMEL012065g1.t1	4-aminobutyraldehyde dehydrogenase
HMEL013584g2.t1	leucine-rich repeat-containing protein 57 isoform X1
HMEL036603g1.t1	uncharacterized protein LOC110384334
HMEL035524g1.t1	ankyrin repeat domain-containing protein 11 isoform X1
HMEL015940g1.t1	arfGAP with SH3 domain, ANK repeat and PH domain-containing protein isoform X1
HMEL013073g1.t2	regulator of microtubule dynamics protein 1
HMEL005501g1.t1	---NA---
HMEL021035g1.t1	ankyrin repeat and SAM domain-containing protein 1A-like isoform X1
HMEL003388g2.t1	hypothetical protein KGM_208401
HMEL037987g1.t1	---NA---
HMEL031830g1.t1	folliculin-interacting protein 2 isoform X2
HMEL033668g1.t1	lysosomal-associated transmembrane protein 4A-like
Upregulated genes in mouthparts of <i>H. cydno</i> females	
ID	Annotation
HMEL030967g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL031425g1.t1	reverse transcriptase
HMEL037919g1.t1	uncharacterized protein LOC117989496
HMEL005900g1.t1	phospholipase ABHD3
HMEL037464g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X1
HMEL032593g1.t1	pupal cuticle protein 36-like
HMEL011715g1.t1	---NA---
HMEL037136g1.t1	skin secretory protein xP2-like
HMEL031734g1.t1	---NA---
HMEL012617g2.t1	RNA-directed DNA polymerase from mobile element jockey

HMEL013458g1.t1	hemolin-like
HMEL009627g2.t1	fibrinogen silencer-binding protein-like
HMEL013052g1.t1	mitochondrial 2-oxoglutarate/malate carrier protein-like
HMEL003599g1.t1	circadian clock-controlled protein-like
HMEL003519g1.t1	myrosinase 1-like
HMEL010291g1.t1	Bm8 interacting protein 2d-2
HmelGSTs2.mrna	GST
HMEL014783g1.t1	circadian clock-controlled protein-like
HMEL030564g1.t1	Microprocessor complex subunit DGCR8
HMEL017436g1.t1	cuticular protein glycine-rich 20
HMEL036843g1.t1	chymotrypsin inhibitor
HMEL003519g2.t1	myrosinase 1-like
HMEL006748g1.t1	odorant binding protein
HMEL037614g1.t1	cuticular protein CPH
HMEL031921g1.t1	larval cuticle protein 1-like
HMEL007254g1.t1	prisilkin-39-like
HMEL034644g1.t1	facilitated trehalose transporter Tret1-like
HMEL035792g1.t1	Endonuclease-reverse transcriptase
HMEL010801g3.t1	Probable RNA-directed DNA polymerase from transposon X-element
HMEL030660g1.t1	RNA-directed DNA polymerase from mobile element jockey-like isoform X2
HMEL003835g1.t1	endocuticle structural glycoprotein SgAbd-1-like
HMEL020420g2.t1	RNA-directed DNA polymerase from mobile element jockey
HMEL022241g1.t1	fibrinogen silencer-binding protein-like
HMEL011477g1.t1	dynactin subunit 2
HMEL013444g1.t1	zinc finger protein 33B-like
HMEL007354g1.t1	twitchin isoform X2
HMEL017037g1.t2	solute carrier family 2, facilitated glucose transporter member 1-like isoform X1
HMEL008087g2.t1	KRAB-A domain-containing protein 2-like
HMEL012685g1.t1	uncharacterized LOC106108503 precursor
HMEL007002g1.t1	larval cuticle protein 1-like
HMEL021488g1.t1	prostaglandin reductase 1-like
HMEL013184g2.t2	coatomer subunit alpha isoform X2
HMEL008178g1.t1	flavin reductase (NADPH)
HMEL009296g1.t1	activating signal cointegrator 1 complex subunit 2 homolog
HmelGSTs1.mrna	GST
HMEL036861g1.t1	hypothetical protein evm_011137
HMEL035902g1.t1	---NA---
HMEL012150g1.t1	solute carrier family 22 member 13-like
HMEL002899-RA	cuticular protein CPG24
HMEL013164g1.t1	facilitated trehalose transporter Tret1-like
HmelGSTs10.mrna	GST
HMEL030029g1.t1	Probable RNA-directed DNA polymerase from transposon BS
HMEL002648g1.t1	complex III assembly factor LYRM7

HMEL035990g1.t1	Transposase-like protein
HMEL011646g1.t1	centrosomal protein of 164 kDa-like
HMEL010373g1.t1	uncharacterized LOC106113675 precursor
HMEL021415g1.t1	endocuticle structural glycoprotein SgAbd-5-like
HMEL007347g1.t1	transcriptional enhancer factor TEF-1 isoform X1
HMEL037483g1.t1	phosphotriesterase-related protein
HMEL003179g1.t1	---NA---
HMEL016408g1.t1	C-type lectin 4 precursor
HMEL031240g1.t1	xin actin-binding repeat-containing protein 2 isoform X1
HMEL002685g1.t1	chromatin assembly factor 1 subunit B
HMEL010801g2.t1	Nucleic-acid-binding protein from transposon X-element
HMEL017435g2.t1	retinol dehydrogenase 13-like
HMEL009816g1.t1	BTB/POZ domain-containing protein KCTD1
Upregulated genes in mouthparts of <i>H. cydno</i> males	
ID	Annotation
HMEL036487g1.t1	aldehyde dehydrogenase, mitochondrial
HMEL035821g1.t1	zinc finger CCCH domain-containing protein 10
HMEL035526g1.t2	peptide transporter family 1 isoform X2
HMEL034406g1.t1	circadian clock-controlled protein-like
HMEL034439g1.t3	calcium-dependent secretion activator isoform X1
HMEL011221g1.t1	angiotensin-converting enzyme-like
HMEL012065g1.t1	4-aminobutyraldehyde dehydrogenase
HMEL038072g1.t1	putative serine carboxypeptidase CPVL
HMEL038041g1.t1	4-coumarate--CoA ligase 1-like
HMEL005629g1.t1	probable cytochrome P450 9f2
HMEL015981g1.t1	uncharacterized protein LOC113401061
HMEL032427g1.t1	---NA---
HMEL030213g1.t1	alpha-tocopherol transfer protein-like isoform X2
HMEL011026g1.t1	protein cycle isoform X2
HMEL032925g1.t1	probable cytochrome P450 9f2
HMEL008325g1.t2	5-AMP-activated protein kinase catalytic subunit alpha-2 isoform X1
HMEL003979g1.t3	period circadian protein isoform X8
HMEL021035g1.t1	ankyrin repeat and SAM domain-containing protein 1A-like isoform X1
HMEL036644g1.t1	---NA---
HMEL036644g1.t2	---NA---
HMEL022669-RA	UDP-glucuronosyltransferase 2B17-like
HMEL013184g2.t1	coatomer subunit alpha isoform X1

Supplementary Table 11. Gene annotation of upregulated genes when comparing female and male antenna, leg, and mouthpart tissues in *H. melpomene*.

Upregulated genes in antennae of <i>H. melpomene</i> females	
ID	Annotation
HMEL034101g1.t1	uncharacterized protein K02A2.6-like isoform X1
HMEL034176g1.t1	PREDICTED: uncharacterized protein K02A2.6-like isoform X1
HMEL004446g1.t1	uncharacterized protein LOC116768575
HMEL014308g1.t1	urbain precursor
HMEL031808g1.t1	RNA-directed DNA polymerase from mobile element jockey-like
HMEL006748g1.t1	odorant binding protein
HMEL037493g1.t1	lipase member H-A-like
HMEL005285g1.t1	putative sporulation protein YqfD
HMEL003209g1.t2	putative sodium-dependent multivitamin transporter
HMEL007059g7.t1	3-oxoacyl-[acyl-carrier-protein] reductase FabG-like
HMEL011873g2.t1	arylsulfatase B-like
HMEL034126g1.t1	uncharacterized protein LOC112053984
HMEL005285g2.t1	trace amine-associated receptor 1
HMEL011355g1.t1	spindle pole body component 110 isoform X1
HMEL015526g1.t1	dentin sialophosphoprotein
HMEL004535g1.t1	skin secretory protein xP2-like
HMEL009710g1.t1	alpha-tocopherol transfer protein-like
HMEL008412g1.t1	membrane alanyl aminopeptidase-like
HMEL004850g2.t1	dopamine N-acetyltransferase-like
HMEL007135g1.t1	---NA---
HmelGSTs9.mrna	GST
HMEL002722g1.t1	glycine-rich cell wall structural protein
HMEL036862g1.t1	toll-like receptor 2
HMEL033978g1.t1	serine-rich adhesin for platelets-like isoform X1
HMEL022537g1.t1	glucose dehydrogenase [FAD, quinone]
HMEL003022g1.t1	xanthine dehydrogenase 1-like
HMEL005780g1.t1	lipase member H-A-like
HMEL020539g1.t1	cytochrome P450 6B1-like
HMEL034861g1.t1	androgen-dependent TFPI-regulating protein-like
HMEL011130g1.t1	SERAC1 protein
HMEL032765g1.t1	---NA---
HMEL012366g1.t1	uncharacterized protein LOC113394873
HMEL016237g1.t1	circadian clock-controlled protein-like
HMEL014821g1.t2	aldose reductase-like isoform X2
HMEL034605g1.t2	uncharacterized LOC106106657 precursor
HMEL003671g1.t1	putative cuticle protein
HMEL011192g1.t1	putative ammonium transporter 2
HMEL014492g1.t1	phospholipase A1-like
HMEL009816g1.t1	BTB/POZ domain-containing protein KCTD1
HMEL017107g1.t1	transmembrane protease serine 9-like

HMEL017144g1.t1	Pancreatic lipase-related protein 1
HMEL022259g3.t1	---NA---
HMEL013136g4.t1	myrosinase 1-like
HMEL006174g2.t1	uncharacterized protein LOC113402709
HMEL014628g1.t1	alpha-tocopherol transfer protein-like
HMEL034521g1.t1	unnamed protein product
HMEL016015g1.t1	fatty-acid amide hydrolase 2-like
HMEL018039g1.t1	CCR4-NOT transcription complex subunit 7-like isoform X1
HMEL010344g1.t1	protein obstructor-E isoform X1
HmOBP39	olfactory binding protein
HMEL010953g3.t1	superoxide dismutase [Cu-Zn]-like
HMEL032483g1.t1	endonuclease-reverse transcriptase
HMEL002212g1.t2	chitin synthase A
HMEL013908g2.t1	cuticular protein CPH
HMEL016015g4.t1	fatty-acid amide hydrolase 2-like
HMEL010348g1.t1	protein obstructor-E-like
HmelUGT40V3.mrna	UGT
HMEL012250g1.t1	uncharacterized oxidoreductase TM_0325-like
HMEL006003g1.t1	putative cuticle protein
HMEL003835g1.t1	endocuticle structural glycoprotein SgAbd-1-like
HmelGSTe3.mrna	GST

Upregulated genes in antennae of *H. melpomene* males

ID	Annotation
HMEL002739g1.t1	cuticle protein 16.5
HMEL006578g1.t1	unnamed protein product
HMEL008072g1.t1	uncharacterized protein LOC113398429
HMEL002108g1.t1	glucose-dependent insulinotropic receptor-like isoform X1
HMEL032619g1.t1	ecdysteroid 22-kinase
HMEL015999g1.t2	Ig-like and fibronectin type-III domain-containing protein 2 isoform X1
HMEL031830g1.t2	folliculin-interacting protein 2 isoform X1
HMEL004916g1.t1	neuropathy target esterase sws isoform X3
HMEL034595g1.t1	zinc transporter ZIP13 homolog
HMEL036941g1.t1	terminal nucleotidyltransferase 5C isoform X2
HMEL037738g1.t1	uncharacterized LOC106121242
HMEL033388g1.t1	uncharacterized protein LOC113394141 isoform X2
HMEL007866g1.t2	protein goliath isoform X1
HMEL012587-RA	probable cytochrome P450 49a1
HMEL008241g1.t1	serine/threonine-protein kinase minibrain isoform X1
HMEL037660g1.t1	arf-GAP with dual PH domain-containing protein 1-like isoform X1
HMEL031464g1.t1	pancreatic triacylglycerol lipase-like
HMEL034439g1.t3	calcium-dependent secretion activator isoform X1
HMEL007308g1.t1	low-density lipoprotein receptor-like isoform X2
HMEL032925g1.t2	probable cytochrome P450 9f2
HMEL033910g1.t1	cyclic AMP response element-binding protein A isoform X1

HMEL017189g2.t1	---NA---
HMEL010735g1.t2	BCL2/adenovirus E1B 19 kDa protein-interacting protein 3 isoform X1
HMEL004608g2.t1	probable cytochrome P450 49a1
HMEL017061g2.t1	hypothetical protein RR46_04165
HMEL007773g2.t1	neuronal calcium sensor 2
HMEL013424g1.t1	transcription initiation factor TFIID subunit 7-like
HMEL009754g1.t1	hexokinase type 2 isoform X1
HMEL003217g1.t1	molybdenum cofactor sulfurase
HMEL015100g2.t1	suppressor of cytokine signaling 2-like isoform X1
HMEL025038g2.t2	voltage-gated potassium channel subunit beta-2 isoform X5
HMEL015482g1.t3	calcium-activated potassium channel slowpoke isoform X22
HMEL015497g1.t1	myocyte-specific enhancer factor 2 isoform X1
HMEL013370g2.t1	myc proto-oncogene protein
HMEL013901g1.t1	3-phosphoinositide-dependent protein kinase 1 isoform X1
HMEL012199g2.t1	WD repeat-containing protein 47 isoform X2
HMEL017189g1.t1	monocarboxylate transporter 12
HmelUGT40W2.mrna	UGT
HMEL004332g1.t1	putative Insulin receptor precursor
HMEL032925g1.t1	probable cytochrome P450 9f2
HMEL015174g1.t4	E3 ubiquitin-protein ligase UBR5 isoform X4
HMEL036619g1.t1	sialin
HMEL012649g1.t1	putative secreted peptide 30
HMEL005250g1.t1	hexokinase-2-like
HMEL004243g1.t2	Calcium-independent phospholipase A2-gamma
HMEL003209g1.t1	putative sodium-dependent multivitamin transporter
HMEL014774g1.t1	uncharacterized protein LOC113395164
HMEL014094g1.t1	insulin-like receptor
HMEL032926g1.t1	senecionine N-oxygenase isoform X1

Upregulated genes in legs of *H. melpomene* females

ID	Annotation
HMEL034101g1.t1	uncharacterized protein K02A2.6-like isoform X1
HMEL034176g1.t1	PREDICTED: uncharacterized protein K02A2.6-like isoform X1
HMEL004446g1.t1	uncharacterized protein LOC116768575
HMEL031808g1.t1	RNA-directed DNA polymerase from mobile element jockey-like
HMEL003661g1.t1	---NA---
HMEL005596-RA	ejaculatory bulb-specific protein 3-like
HMEL017148-RA	cytochrome P450 4c3-like
HMEL031926g1.t1	endocuticle structural glycoprotein SgAbd-8-like
HMEL009710g1.t1	alpha-tocopherol transfer protein-like
HMEL010953g3.t1	superoxide dismutase [Cu-Zn]-like
HMEL002186g1.t1	putative protease inhibitor 4
HMEL007404g1.t1	transmembrane protein 53-like
HMEL014492g1.t1	phospholipase A1-like
HMEL007135g1.t1	---NA---

HMEL010344g1.t1 protein obstructor-E isoform X1
 HMEL006744g1.t1 circadian clock-controlled protein-like
 HMEL013159g1.t1 facilitated trehalose transporter Tret1-like
 HMEL006379g1.t1 Neuronal pentraxin-2
 HMEL006231g1.t1 very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase hpo-8
 HMEL004850g2.t1 dopamine N-acetyltransferase-like
 HMEL014531g1.t1 uncharacterized protein LOC113392023
 HMEL033734g1.t1 ---NA---
 HMEL002001g1.t1 hypothetical protein B5V51_7220
 HMEL015171g2.t1 glutamine--fructose-6-phosphate aminotransferase [isomerizing] 1-like
 HmelGSTd1.mrna GST
 HMEL030667g1.t1 nose resistant to fluoxetine protein 6-like
 HMEL013672g1.t1 juvenile hormone epoxide hydrolase-like
 HMEL034126g1.t1 uncharacterized protein LOC112053984
 HMEL008541g1.t1 protein app1-like
 HMEL012250g1.t1 uncharacterized oxidoreductase TM_0325-like
 HMEL033930g1.t1 tenascin-like isoform X1
 HMEL036393g1.t1 alpha-tocopherol transfer protein-like
 HMEL036865g1.t1 protein msta-like isoform X1
 HMEL005413g1.t1 chitin deacetylase 4
 HMEL011340g2.t1 SET domain-containing protein SmydA-8-like
 HMEL008325g1.t2 5-AMP-activated protein kinase catalytic subunit alpha-2 isoform X1
 HMEL013469g3.t1 tryptase beta-2-like
 HMEL012499-RA Serine proteinase stubble
 HMEL010201g2.t1 uncharacterized protein LOC113395223 isoform X1
 HMEL006214g1.t1 flocculation protein FLO11 isoform X1
 HMEL015404g1.t1 la1-like protein 15 isoform X4
 HMEL032503g1.t1 tctex1 domain-containing protein 1-A-like
 HMEL005468g1.t1 uncharacterized LOC106124634 precursor
 HMEL017583g1.t2 integrin alpha-PS1 isoform X2
 HMEL006014g1.t1 endocuticle structural glycoprotein SgAbd-5-like
 HmelGSTe3.mrna GST
 HMEL034521g1.t1 unnamed protein product
 HMEL032158g1.t1 uncharacterized protein LOC113398144
 HmelGSTs9.mrna GST
 HMEL005109g1.t1 cadherin-23
 HMEL008386g1.t1 G kinase-anchoring protein 1-like isoform X1
 HMEL035928g1.t1 unnamed protein product
 HMEL033494g1.t1 spectrin beta chain isoform X3
 HMEL017435g2.t1 retinol dehydrogenase 13-like
 HMEL017436g1.t1 cuticular protein glycine-rich 20
 HMEL011032g1.t1 cubilin-like
 HMEL010826g2.t1 titin-like isoform X2
 HMEL013325g2.t1 delta and Notch-like epidermal growth factor-related receptor isoform X1

HMEL017127g1.t9	Myosin heavy chain, muscle
HMEL009671g1.t1	putative protease inhibitor 4
HMEL014628g1.t1	alpha-tocopherol transfer protein-like
HMEL032615g1.t1	nose resistant to fluoxetine protein 6-like
HMEL015526g1.t1	dentin sialophosphoprotein
HMEL016204g1.t1	delta-1-pyrroline-5-carboxylate synthase isoform X1
HMEL031263g1.t3	uncharacterized protein LOC116775225 isoform X6
HMEL003114-RA	ejaculatory bulb-specific protein 3-like
HMEL036246g1.t1	uncharacterized protein LOC113402398
HMEL036554g1.t1	uncharacterized protein LOC117989496
HMEL030922g1.t1	probable peroxisomal acyl-coenzyme A oxidase 1
HMEL005741g2.t3	cyclin-dependent kinase 11B isoform X1
HMEL012546g3.t1	sulfotransferase 1C4-like
HMEL002369g1.t1	nose resistant to fluoxetine protein 6-like
HMEL013116g1.t1	glucose dehydrogenase [FAD, quinone]-like
HMEL033982g1.t1	proton-coupled amino acid transporter-like protein pathetic
HMEL007261g2.t1	E3 ubiquitin-protein ligase ZNRF2 isoform X2
Upregulated genes in legs of <i>H. melpomene</i> males	
ID	Annotation
HMEL002564-RA	death-associated inhibitor of apoptosis 1-like isoform X2
HMEL009791g1.t2	Protein PRRC2A
HMEL004713g1.t1	SUN domain-containing ossification factor isoform X2
HMEL016113g1.t2	ATP-dependent zinc metalloprotease YME1 homolog isoform X3
HMEL002053g1.t1	hypothetical protein
HMEL006500g1.t1	protein CREBRF homolog
HMEL021955g1.t1	transmembrane protease serine 9-like
HMEL032805g1.t1	G protein-activated inward rectifier potassium channel 3-like isoform X2
HMEL037110g1.t1	calcium-activated potassium channel slowpoke isoform X13
HMEL003909g1.t1	nuclear receptor-binding protein homolog
HMEL003212g1.t2	uncharacterized protein LOC113401289 isoform X9
HMEL032925g1.t2	probable cytochrome P450 9f2
HMEL030920g1.t1	U4/U6 small nuclear ribonucleoprotein Prp31
HMEL033910g1.t1	cyclic AMP response element-binding protein A isoform X1
HMEL012199g1.t1	WD repeat-containing protein 47 isoform X3
HMEL017805g1.t1	myb-like protein D
HMEL008455g1.t1	amyloid beta A4 precursor protein-binding family B member 1-interacting protein isoform X1
HMEL008976g1.t2	S-adenosylmethionine synthase
HMEL035507g1.t1	proton-coupled amino acid transporter-like protein pathetic
HMEL015545g1.t1	putative tricarboxylate transport protein, mitochondrial
HMEL037092g1.t2	histone-lysine N-methyltransferase 2C-like
HMEL032805g1.t3	G protein-activated inward rectifier potassium channel 3-like isoform X3
HMEL006630g1.t1	proton-coupled amino acid transporter-like protein pathetic
HMEL005250g1.t1	hexokinase-2-like

HMEL006797g1.t1	probable G-protein coupled receptor Mth-like 3 isoform X1
HMEL006578g1.t1	unnamed protein product
HMEL034424g1.t1	facilitated trehalose transporter Tret1-2 homolog
HMEL010947g1.t1	23 kDa integral membrane protein-like
HMEL036941g1.t1	terminal nucleotidyltransferase 5C isoform X2
HMEL004608g1.t1	probable cytochrome P450 49a1
HMEL009744g1.t1	PI-PLC X domain-containing protein 3-like isoform X2
HMEL030293g1.t1	hypothetical protein evm_013452
HMEL012587-RA	probable cytochrome P450 49a1
HMEL017127g1.t7	myosin heavy chain, muscle isoform X24
HMEL015859g1.t1	proteoglycan 4
HMEL002163g1.t1	venom carboxylesterase-6-like
HMEL003351g1.t2	multidrug resistance-associated protein 4-like isoform X1
HMEL021096g1.t1	protein lifeguard 1-like isoform X2
HMEL030677g1.t1	P94 protein
HMEL031464g1.t1	pancreatic triacylglycerol lipase-like
HmelUGT40W2.mrna	UGT
HMEL003365g1.t1	alpha-tocopherol transfer protein-like
HMEL013370g2.t1	myc proto-oncogene protein
HmelGSTo7.mrna	GST
HMEL016920g2.t1	lipoamide acyltransferase component of branched-chain alpha-keto acid dehydrogenase complex, mitochondrial
HMEL034512g1.t2	potassium voltage-gated channel protein Shal isoform X2
HMEL012199g2.t1	WD repeat-containing protein 47 isoform X2
HMEL013584g2.t1	leucine-rich repeat-containing protein 57 isoform X1
HMEL011922g1.t1	arf-GAP with coiled-coil, ANK repeat and PH domain-containing protein 2 isoform X1
HMEL005230g1.t1	acyl-CoA Delta(11) desaturase-like
HMEL015482g1.t3	calcium-activated potassium channel slowpoke isoform X22
HMEL005408g2.t2	elongation of very long chain fatty acids protein AAEL008004 isoform X2
HMEL003351g1.t1	multidrug resistance-associated protein 4-like isoform X2
HMEL012674g4.t1	exonuclease GOR-like isoform X1
HMEL004628g1.t1	---NA---
HMEL009658g1.t2	beta-arrestin-1
HMEL017687g1.t1	neprilysin-4-like isoform X1
HMEL004608g2.t1	probable cytochrome P450 49a1
HMEL003131g1.t1	cyclin-dependent kinase inhibitor 1-like
HMEL006484g1.t1	ankyrin-3-like isoform X2
HMEL032663g1.t1	forkhead box protein K1
HMEL013124g1.t1	facilitated trehalose transporter Tret1-like
HMEL009754g1.t1	hexokinase type 2 isoform X1
HMEL017583g1.t1	integrin alpha-PS1 isoform X1
HMEL020979g1.t2	probable ribonuclease ZC3H12B isoform X2
HMEL020073g1.t1	adiponectin receptor protein

HMEL036619g1.t1	sialin
HMEL003398g1.t2	irregular chiasm C-roughest protein-like isoform X1
HMEL002108g1.t1	glucose-dependent insulinotropic receptor-like isoform X1
HMEL017189g2.t1	---NA---
HMEL030678g1.t1	Early 94 kDa protein
HMEL008241g1.t1	serine/threonine-protein kinase minibrain isoform X1
HMEL014249g1.t1	ion transport peptide-like isoform X1
HMEL005933-RA	cytochrome P450 4C1-like
HMEL031830g1.t1	folliculin-interacting protein 2 isoform X2
HMEL008860g1.t1	UPF0518 protein GH13096 isoform X1
HMEL016978g1.t1	Type I inositol-1,4,5-trisphosphate 5-phosphatase
HMEL015100g2.t1	suppressor of cytokine signaling 2-like isoform X1
HMEL017044g1.t2	E3 ubiquitin-protein ligase HECW2 isoform X1
HMEL015321g1.t1	phosphoserine phosphatase isoform X1
HMEL013901g1.t1	3-phosphoinositide-dependent protein kinase 1 isoform X1
HMEL004332g1.t1	putative Insulin receptor precursor
HMEL008325g1.t1	5-AMP-activated protein kinase catalytic subunit alpha-2 isoform X2
HMEL009290-RA	protein peste-like
HMEL017709g1.t2	adipose triglyceride lipase
HMEL030990g1.t1	actin
HMEL012649g1.t1	putative secreted peptide 30
HMEL014094g1.t1	insulin-like receptor
HMEL010735g1.t1	BCL2/adenovirus E1B 19 kDa protein-interacting protein 3 isoform X2

Upregulated genes in mouthparts of *H. melpomene* females

ID	Annotation
HMEL034101g1.t1	uncharacterized protein K02A2.6-like isoform X1
HMEL034176g1.t1	PREDICTED: uncharacterized protein K02A2.6-like isoform X1
HMEL031808g1.t1	RNA-directed DNA polymerase from mobile element jockey-like
HMEL022638g5.t1	pancreatic lipase-related protein 2-like
HMEL006850g1.t2	NADH-cytochrome b5 reductase 2 isoform X1
HMEL036651g1.t1	seminal fluid protein HACP044
HMEL006748g1.t1	odorant binding protein
HmelUGT40V1.mrna	UGT
HMEL010953g3.t1	superoxide dismutase [Cu-Zn]-like
HMEL003599g1.t1	circadian clock-controlled protein-like
HMEL033367g1.t1	uncharacterized protein LOC113396892
HMEL016051g1.t1	seminal fluid protein HACP044
HMEL011032g1.t1	cubilin-like
HMEL004525g1.t1	carboxypeptidase inhibitor
HMEL031443g1.t1	myrosinase 1-like
HMEL011062g1.t1	alpha-tocopherol transfer protein-like
HMEL035254g1.t3	paxillin isoform X2
HmelGSTe3.mrna	GST
HMEL014483g1.t1	myrosinase 1-like

HMEL037186g1.t1	gelsolin, cytoplasmic-like
HmelGSTs9.mrna	GST
HMEL013469g3.t1	tryptase beta-2-like
HMEL004395g1.t1	cation channel sperm-associated protein 1
HMEL008770-RA	cytochrome P450 4C1-like
HMEL036873g1.t1	integrin beta-nu
HMEL011741g1.t1	Uncharacterized protein OBRU01_06617
HMEL006231g1.t1	very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase hpo-8
HMEL036246g1.t1	uncharacterized protein LOC113402398
HMEL034417g1.t1	hypothetical protein RR46_02196
HMEL033780g1.t1	epoxide hydrolase 4-like
HMEL008599g1.t1	clavesin-1-like isoform X2
HMEL017484g1.t1	acetyl-CoA acetyltransferase, mitochondrial isoform X1
HMEL009440g1.t1	E3 ubiquitin-protein ligase TRIM37-like
HmelGSTs1.mrna	GST
HMEL008809g1.t1	rhythmically expressed gene 2 protein-like

Upregulated genes in mouthparts of *H. melpomene* males

ID	Annotation
HMEL017437g1.t1	chondroitin sulfate synthase 1
HMEL030919g1.t1	Uncharacterized protein OBRU01_02090
HMEL004113g1.t1	ornithine decarboxylase 1-like
HMEL008824g1.t2	5-AMP-activated protein kinase subunit gamma-2-like isoform X1
HMEL034383g1.t1	DNL-type zinc finger protein-like
HMEL006500g1.t1	protein CREBRF homolog
HMEL006157g5.t1	---NA---
HMEL006690g2.t1	sodium/hydrogen exchanger 7 isoform X3
HMEL017093g2.t1	esterase B1-like
HMEL013424g1.t1	transcription initiation factor TFIID subunit 7-like
HMEL020797g1.t1	Vacuolar H ⁺ ATPase 100kD subunit 1
HMEL010947g1.t1	23 kDa integral membrane protein-like
HMEL030865g1.t3	sodium/hydrogen exchanger 7 isoform X3
HMEL006799g1.t1	protein 60A
HMEL005934g1.t1	glutaminase liver isoform, mitochondrial isoform X1
HMEL004113g2.t1	---NA---
HMEL012221g1.t2	large proline-rich protein bag6-like isoform X2
HMEL003131g1.t1	cyclin-dependent kinase inhibitor 1-like
HMEL037514g1.t1	cyclin-dependent kinase 14 isoform X2
HMEL034764g1.t1	mitogen-activated protein kinase kinase kinase 15 isoform X1
HMEL011418g1.t1	putative myb transcription factor
HMEL009677g1.t1	cyclin J
HMEL037352g1.t1	paired amphipathic helix protein Sin3a isoform X1
HMEL034595g1.t1	zinc transporter ZIP13 homolog
HMEL010735g1.t2	BCL2/adenovirus E1B 19 kDa protein-interacting protein 3 isoform X1
HMEL005381g1.t2	ubiquitin carboxyl-terminal hydrolase 31

HMEL035809g1.t1 epidermal growth factor receptor isoform X1
 HMEL036869g1.t2 early endosome antigen 1-like isoform X2
 HMEL032824g1.t1 heme peroxidase 2
 HMEL002163g1.t1 venom carboxylesterase-6-like
 HMEL032216g1.t1 stromal interaction molecule homolog isoform X1
 HMEL032242g1.t1 hypothetical protein KGM_216114
 HMEL009863g1.t1 MAP kinase-activated protein kinase 2
 HMEL017127g1.t2 myosin heavy chain, muscle isoform X16
 HMEL009703g1.t1 uncharacterized protein LOC113397363
 HMEL005741g2.t2 cyclin-dependent kinase 11B
 HMEL006157g1.t1 tribbles homolog 2-like
 HMEL035328g1.t1 Protein phosphatase 1 regulatory subunit 15A
 HMEL032516g1.t1 ---NA---
 HMEL035821g1.t1 zinc finger CCCH domain-containing protein 10
 HMEL030296g1.t1 endonuclease-reverse transcriptase HmRTE-e01
 HMEL004608g1.t1 probable cytochrome P450 49a1
 HMEL009440g1.t2 E3 ubiquitin-protein ligase TRIM37-like
 HMEL003068g1.t1 uncharacterized protein LOC113400921 isoform X1
 HMEL015321g1.t1 phosphoserine phosphatase isoform X1
 HMEL015947g1.t1 protein windpipe
 HMEL009754g1.t1 hexokinase type 2 isoform X1
 HMEL037660g1.t1 arf-GAP with dual PH domain-containing protein 1-like isoform X1
 HMEL015859g1.t1 proteoglycan 4
 HMEL012199g2.t1 WD repeat-containing protein 47 isoform X2
 HMEL008241g1.t1 serine/threonine-protein kinase minibrain isoform X1
 HMEL005948g1.t1 putative PDZ domain containing 3
 HMEL037110g1.t1 calcium-activated potassium channel slowpoke isoform X13
 HMEL009312g4.t1 protein Im not dead yet
 HMEL034862g1.t1 ATP-binding cassette sub-family G member 4
 HMEL012587-RA probable cytochrome P450 49a1
 HMEL009312g1.t1 protein Im not dead yet
 HMEL008353g1.t1 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1
 HMEL017724g1.t2 teneurin-m isoform X3
 HMEL008824g1.t1 5-AMP-activated protein kinase subunit gamma-2-like isoform X1
 HMEL016978g1.t1 Type I inositol-1,4,5-trisphosphate 5-phosphatase
 HMEL017127g1.t7 myosin heavy chain, muscle isoform X24
 HMEL006850g1.t1 NADH-cytochrome b5 reductase 2 isoform X2
 HMEL004608g2.t1 probable cytochrome P450 49a1
 HMEL009524g1.t1 PREDICTED: uncharacterized protein LOC106139693 isoform X1
 HMEL032663g1.t1 forkhead box protein K1
 HMEL008976g1.t1 S-adenosylmethionine synthase isoform X1
 HMEL009320g1.t1 LIM and SH3 domain protein Lasp isoform X1
 HMEL008156g3.t1 mothers against decapentaplegic homolog 6
 HMEL008353g1.t2 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase-like isoform X1

HMEL011037g3.t3	GRB10-interacting GYF protein 2 isoform X4
HMEL005325g2.t1	bifunctional heparan sulfate N-deacetylase/N-sulfotransferase
HMEL014850g1.t1	insulin-like growth factor isoform X3
HMEL017189g1.t1	monocarboxylate transporter 12
HMEL015100g2.t1	suppressor of cytokine signaling 2-like isoform X1
HMEL005630g1.t1	protein embryonic gonad-like
HMEL011939g1.t1	facilitated trehalose transporter Tret1-like
HMEL016976g1.t1	mycosubtilin synthase subunit C
HMEL014452g1.t1	annexin B9 isoform X3
HMEL016705-RA	cytochrome P450 4g15
HMEL036941g1.t1	terminal nucleotidyltransferase 5C isoform X2
HMEL016977g1.t2	epsilon-sarcoglycan isoform X1
HMEL036619g1.t1	sialin
HMEL009791g1.t2	Protein PRRC2A
HMEL004332g1.t1	putative Insulin receptor precursor
HMEL005250g1.t1	hexokinase-2-like
HMEL013901g1.t1	3-phosphoinositide-dependent protein kinase 1 isoform X1
HMEL009019g1.t1	neuroglian isoform X1
HMEL005930g1.t2	transcriptional coactivator YAP1 isoform X3
HMEL011747g1.t1	aquaporin AQPae.a
HMEL021946g1.t2	UNC93-like protein MFSD11
HMEL014363g1.t2	zinc finger CCCH domain-containing protein 13 isoform X1
HMEL037224g1.t1	solute carrier family 2, facilitated glucose transporter member 1-like
HMEL022129g1.t1	uncharacterized protein LOC113394950
HMEL012649g1.t1	putative secreted peptide 30
HMEL014926g2.t1	monocarboxylate transporter 3
HMEL013885g1.t1	fatty acyl-CoA reductase 1

Supplementary Table 12. Admixture levels of differentially expressed genes in chemosensory tissues.

Comparison	Species	Tissue	f_d (median value)
male vs. female	<i>H. cydno</i>	antennae	0.1821
	<i>H. cydno</i>	legs	0.1286
	<i>H. cydno</i>	mouthparts	0.1921
	<i>H. melpomene</i>	antennae	0.1954
	<i>H. melpomene</i>	legs	0.1731
	<i>H. melpomene</i>	mouthparts	0.1244
day-five female vs. day-two female	<i>H. cydno</i>	antennae	0.1914
	<i>H. cydno</i>	legs	0.1994
	<i>H. cydno</i>	mouthparts	0.2009
<i>H. cydno</i> vs. <i>H. melpomene</i> *	<i>H. melpomene</i>	antennae	0.1840
	<i>H. melpomene</i>	legs	0.1910
	<i>H. melpomene</i>	mouthparts	0.2048
		antennae	0.1177
		legs	0.1196
		mouthparts	0.1263

* indicates the admixture level of differentially expressed genes is significantly different from the genome-wide f_d (0.1869) calculated based on total 21,661 annotated genes with normal distribution $P < 0.05$.

Supplementary Table 13. Non-random association between genomic divergence and differential expression of chemosensory tissues with the color pattern gene *optix* in *H. melpomene*.

	LD values (r^2) calculated in 50 kb windows										<i>P</i>
	1	2	3	4	5	6	7	8	9	10	
Chr 18 (<i>optix</i>)	0.1695	0.1855	0.1779	0.1146	0.1804	0.1321	0.1437	0.1703	0.1784	0.1235	NA
Chr 1	0.0786	0.1151	0.0962	0.1441	0.0608	0.1155	0.1157	0.1245	0.0786	0.1317	0.0004
Chr 12	0.0788	0.0631	0.0980	0.1421	0.1538	0.0990	0.1437	0.0788	0.1341	0.1260	0.0027
Chr 19	0.1159	0.1733	0.1107	0.1431	0.1631	0.1833	0.1332	0.0785	0.1162	0.0965	0.0708
Randomly selected (genome-wide)	0.1102	0.1069	0.1099	0.1180	0.1074	0.1361	0.1119	0.1186	0.1208	0.1205	0.0002

Note:

The 50 kb windows are continuous regions on each chromosome (Chr 18, Chr 1, Chr 12 and Chr 19) from 0 to 500 Kb, except for randomly selected windows. *P* values indicate statistical differences from the mean LD value of the first 500 kb region on chromosome 18.

Supplementary Table 14. Hub genes and the numbers of estimated edges.

Hub genes in the three major clusters in <i>H. melpomene</i>	
ID	edge
HmOr2	441
HmOBP6	428
HMEL008320g2.t1	422
HMEL011814g1.t1	419
HmOBP1	418
HmOBP38	417
HmOBP3	415
HMEL033848g1.t1	414
HMEL015247g1.t1	413
HMEL033611g1.t1	412
HMEL011914g2.t1	411
HMEL021639g1.t1	411
HMEL008985g1.t2	410
HMEL011804g1.t1	410
HMEL014743g1.t1	410
HmOBP2	410
HmOBP20	410
HMEL011869g2.t1	405
HMEL035158g1.t1	404
HMEL030379g1.t1	402
HmOr57	401
HMEL013351-RA	397
HMEL033113g1.t1	396
HMEL017528-RA	394
HMEL034623g1.t1	392
HMEL012304g1.t1	390
HMEL015079g1.t1	387
HMEL014794g1.t1	385
HMEL035799g1.t1	385
HMEL015053g1.t1	384
HMEL012338g1.t1	383
HMEL037810g1.t1	382
HMEL016787g1.t1	381
HMEL009162g1.t2	380
HMEL033828g1.t1	380
HMEL008472g1.t1	379
HMEL017127g1.t7	379
HMEL032063g1.t1	379
HMEL011562g1.t1	378
HmOr13	378
HMEL017127g1.t3	377

HMEL021575g1.t1	377
HMEL009162g1.t1	375
HMEL009162g1.t3	375
HMEL010966g1.t1	375
HMEL011914g1.t1	375
HmIR87a	375
HMEL009421g1.t1	374
HmIR75q1	374
HMEL012304g1.t2	373
HMEL011869g3.t1	372
HMEL013040g3.t1	372
HMEL006897g1.t1	371
HMEL010272g1.t1	370
HMEL033610g1.t1	370
HmOr29	370
HMEL007354g1.t3	369
HMEL009462g1.t1	369
HMEL013040g2.t1	368
HMEL003232g1.t1	367
HMEL017153-RA	367
HMEL005232g1.t1	366
HMEL017127g1.t2	366
HmOr19	365
HMEL007962g1.t1	364
HMEL015651g1.t2	363
HMEL010164g1.t1	362
HMEL011562g6.t1	362
HMEL016287g1.t1	362
HMEL016594g1.t1	362
HmOBP21	362
HMEL010955g1.t1	361
HMEL003975g1.t1	360
HMEL036494g1.t2	360
HMEL017154-RA	359
HMEL037099g1.t1	359
HMEL004701g1.t1	358
HMEL009177g1.t1	358
HMEL005541g1.t1	356
HmOr64	356
HMEL006583g1.t1	355
HMEL016985g1.t2	355
HMEL017692g1.t4	355
HmCSP12	355
HmIR31a	355

HMEL033309g1.t1	354
HMEL010338g1.t1	353
HMEL002199g1.t1	352
HMEL011624g4.t1	351
HMEL036493g1.t1	350
HmOr58	350
HMEL005774g1.t1	349
HMEL013069g1.t1	347
HMEL016609g1.t1	347
HMEL034496g1.t1	346
HmelGSTd1.mrna	345
HMEL035263g1.t1	344
HMEL016622g1.t1	343
HMEL007353g1.t4	342
HMEL016985g1.t1	342
HMEL016032g1.t1	341
HMEL006584g1.t1	340
HmCSP11	339
HMEL015202g1.t1	336
HMEL015710g1.t1	336
HMEL032509g1.t1	336
HMEL035852g1.t1	336
HMEL021303g1.t1	335
HMEL006712g1.t1	333
HMEL007233g1.t2	333
HMEL009462g2.t1	333
HMEL016603g1.t1	333
HMEL036494g1.t1	331
HMEL017127g1.t6	330
HMEL034303g1.t1	330
HMEL037956g1.t1	330
HMEL002168g1.t1	329
HMEL014389g1.t1	329
HMEL036494g1.t3	329
HMEL005572g1.t1	328
HMEL009742g1.t1	328
HMEL012949g1.t1	328
HMEL015841g1.t1	327
HMEL007353g1.t3	325
HMEL017127g1.t1	324
HMEL017235g1.t3	323
HMEL002403g1.t1	322
HMEL005241g1.t1	322
HMEL016193g1.t1	322

HMEL013620g2.t1	321
HMEL005015g1.t1	320
HmIR76b	320
HMEL003579g1.t1	319
HMEL002202g1.t1	318
HMEL005676g1.t1	316
HMEL035157g1.t1	314
HmOr71	314
HMEL007496g1.t1	312
HMEL031813g1.t1	312
HMEL034622g1.t1	312
HMEL013099g1.t1	311
HmIR8a	311
HMEL008044g1.t1	310
HMEL012051g1.t1	310
HMEL021313g1.t1	310
HmOr22	309
HMEL007233g1.t1	307
HMEL021572g1.t1	307
HMEL035979g1.t1	307
HMEL011621g1.t1	306
HMEL003764g1.t2	305
HMEL004951g1.t1	305
HMEL008423g1.t1	304
HmOr41	304
HMEL017127g1.t9	302
HMEL032790g1.t1	302
HMEL030950g1.t1	301
HMEL033849g1.t1	300
HMEL003142g1.t1	299
HMEL034304g1.t1	299
HMEL007353g1.t1	297
HmOr49	297
HMEL007151g1.t1	295
HMEL010064g1.t1	295
HMEL010825g1.t1	295
HMEL031109g1.t1	295
HMEL031781g1.t1	294
HMEL007324g1.t1	293
HMEL014608g1.t1	292
HMEL032513g1.t1	292
HMEL005010g1.t1	290
HMEL012299g1.t1	290
HMEL013089g1.t1	290

HMEL033955g1.t1	290
HMEL004402g1.t1	288
HMEL007396g2.t1	287
HMEL012214g1.t1	287
HMEL034053g1.t1	286
HMEL035027g1.t1	285
HMEL004586g2.t1	279
HMEL009669g1.t1	278
HMEL035431g1.t1	278
HMEL016787g1.t2	277
HMEL013867g1.t1	276
HMEL011688g1.t1	275
HMEL017603g1.t1	275
HMEL013867g1.t2	274
HMEL013933g1.t1	274
HmIR75p2	274
HmIR21a	272
HMEL003265g1.t1	271
HMEL035166g1.t1	271
HMEL005352g1.t1	270
HMEL008833g1.t1	270
HMEL035254g1.t2	270
HMEL006690g1.t1	269
HMEL032689g1.t1	269
HMEL003675g2.t1	268
HMEL002665g1.t1	267
HMEL009418g1.t1	267
HMEL012516g1.t1	267
HMEL016846g1.t1	266
HMEL036569g1.t1	265
HMEL015522g1.t1	264
HMEL006306g1.t1	263
HMEL012073g1.t1	262
HMEL007754g1.t1	261
HmOr14	261
HMEL031995g1.t2	260
HMEL011192g1.t1	258
HMEL016911g1.t1	258
HMEL017692g1.t3	258
HMEL035356g1.t1	258
HMEL034302g1.t1	257
HMEL034821g1.t2	257
HMEL006690g1.t3	256
HMEL014810g1.t1	256

HmIR41a	252
HMEL005242g1.t1	251
HMEL015932g1.t1	251
HMEL005447g1.t2	248
HMEL005601g1.t1	248
HMEL004675g1.t1	247
HMEL012531g1.t1	247
HMEL007926g1.t1	245
HMEL035474g1.t1	242
HmOr3	242
HMEL010362g1.t1	240
Hub genes in the three major clusters in <i>H. cydno</i>	
ID	edge
HMEL011814g1.t1	505
HmOBP38	494
HMEL033611g1.t1	493
HmOr2	493
HMEL011914g2.t1	488
HMEL017127g1.t7	481
HMEL011914g1.t1	480
HMEL033848g1.t1	479
HMEL034053g1.t1	479
HMEL030379g1.t1	474
HMEL011804g1.t1	470
HmOBP3	468
HMEL021575g1.t1	467
HMEL008320g2.t1	466
HMEL021572g1.t1	466
HMEL008044g1.t1	464
HMEL012304g1.t1	463
HMEL021639g1.t1	463
HMEL016594g1.t1	461
HMEL017528-RA	460
HmOBP6	460
HMEL006712g1.t1	459
HMEL007151g1.t1	456
HMEL002199g1.t1	455
HmIR8a	453
HMEL011562g6.t1	450
HMEL034496g1.t1	449
HMEL030950g1.t1	448
HMEL035263g1.t1	448
HMEL002168g1.t1	446
HMEL002202g1.t1	446

HMEL007354g1.t3	446
HMEL011562g1.t1	446
HMEL010272g1.t1	445
HMEL009162g1.t3	444
HMEL034623g1.t1	444
HmOr14	444
HMEL032063g1.t1	443
HmOBP20	441
HMEL016787g1.t1	440
HmIR75q1	439
HMEL015247g1.t1	438
HMEL010966g1.t1	436
HMEL016193g1.t1	436
HMEL016032g1.t1	435
HMEL013510g1.t1	434
HMEL035254g1.t2	434
HMEL035852g1.t1	434
HMEL009177g1.t1	433
HMEL009462g2.t1	433
HMEL007233g1.t2	432
HMEL007962g1.t1	431
HMEL008472g1.t1	431
HMEL009162g1.t2	431
HMEL009421g1.t1	430
HmOBP2	430
HMEL007233g1.t1	429
HMEL015651g1.t2	429
HMEL003210g1.t1	428
HmOBP1	428
HMEL004701g1.t1	427
HMEL011688g1.t1	427
HmIR76b	427
HMEL009462g1.t1	426
HMEL031781g1.t1	426
HMEL012299g1.t1	425
HMEL014389g1.t1	424
HMEL003764g1.t2	423
HmelGSTd1.mrna	423
HmOBP21	422
HmOr22	422
HMEL003232g1.t1	421
HMEL010870g1.t1	420
HMEL012949g1.t1	420
HMEL035799g1.t1	420

HMEL036862g1.t1	420
HMEL007353g1.t4	419
HMEL013040g2.t1	419
HMEL015053g1.t1	419
HMEL021303g1.t1	419
HMEL005242g1.t1	416
HMEL010955g1.t1	416
HMEL012304g1.t2	416
HMEL013040g3.t1	416
HmOr57	416
HMEL014743g1.t1	415
HMEL033113g1.t1	415
HMEL037810g1.t1	414
HMEL015710g1.t1	413
HMEL016287g1.t1	413
HMEL031109g1.t1	412
HMEL013069g1.t1	410
HMEL017127g1.t2	410
HMEL034728g1.t1	410
HMEL037956g1.t1	409
HMEL033828g1.t1	407
HMEL032513g1.t1	406
HMEL017154-RA	405
HMEL034303g1.t1	405
HMEL036494g1.t3	405
HMEL008471g6.t1	404
HMEL017692g1.t4	404
HMEL004675g1.t1	403
HMEL016985g1.t2	403
HMEL016985g1.t1	402
HMEL006584g1.t1	401
HMEL009162g1.t1	401
HMEL013620g2.t1	401
HMEL017235g1.t3	400
HMEL009742g1.t1	399
HMEL014608g1.t1	399
HMEL035254g1.t3	399
HMEL035158g1.t1	398
HmCSP12	398
HmOr58	398
HMEL008104g1.t1	397
HMEL035356g1.t1	397
HMEL036494g1.t1	397
HMEL009811g1.t1	396

HMEL010825g1.t1	396
HMEL015776g1.t1	396
HmIR87a	396
HMEL002016g1.t1	395
HMEL010575g1.t2	394
HMEL016622g1.t1	394
HMEL005241g1.t1	391
HMEL005774g1.t1	391
HMEL017127g1.t1	390
HMEL034302g1.t1	390
HMEL035027g1.t1	390
HMEL013089g1.t1	389
HMEL036494g1.t2	389
HMEL003142g1.t1	388
HMEL016603g1.t1	386
HmOr28	386
HMEL005010g1.t1	385
HMEL035794g1.t1	385
HMEL036493g1.t1	383
HMEL005015g1.t1	382
HMEL017520g1.t1	382
HMEL017127g1.t9	381
HMEL033955g1.t1	379
HMEL006583g1.t1	378
HMEL011869g2.t1	376
HMEL007353g1.t5	375
HMEL008833g1.t1	375
HMEL032790g1.t1	374
HMEL017127g1.t6	373
HMEL010338g1.t1	372
HMEL014736g1.t1	372
HMEL016093g1.t1	372
HmOr19	372
HMEL015841g1.t1	370
HMEL032473g1.t1	370
HMEL008423g1.t1	369
HMEL032509g1.t1	369
HMEL014575g1.t1	368
HMEL032607g1.t1	367
HMEL034485g1.t1	366
HMEL035166g1.t1	366
HMEL037950g1.t1	366
HMEL004586g1.t1	364
HMEL002403g1.t1	363

HMEL003579g1.t1	363
HMEL013041g1.t1	363
HMEL021778g1.t1	363
HMEL031995g1.t1	363
HmOr69	362
HMEL031604g1.t1	360
HMEL003751g1.t1	359
HMEL002148g1.t1	357
HMEL017153-RA	357
HMEL003212g2.t2	356
HMEL006897g1.t1	356
HMEL012531g1.t1	356
HMEL031813g1.t1	354
HMEL034622g1.t1	354
HmCSP11	353
HMEL003675g2.t1	351
HMEL009174g1.t1	351
HMEL010071g1.t1	351
HMEL035979g1.t1	350
HmOr50	350
HMEL004058g2.t1	349
HMEL017127g1.t3	347
HMEL003975g1.t1	346
HMEL005631g1.t1	346
HMEL005541g1.t1	345
HMEL011473g1.t1	344
HMEL007396g1.t4	343
HMEL036569g1.t1	343
HMEL007353g1.t3	341
HMEL032158g1.t1	341
HMEL035793g1.t1	341
HMEL031767g1.t1	339
HMEL006690g1.t1	338
HmOr44	338
HMEL031979g1.t1	336
HMEL007353g1.t1	335
HMEL015079g1.t1	333
HMEL012484g2.t1	332
HMEL036054g1.t1	332
HMEL005447g1.t2	326
HMEL011192g1.t1	325
HMEL033849g1.t1	325
HMEL015522g1.t1	322
HMEL017624g1.t1	322

HMEL033309g1.t1	320
HMEL002505g1.t2	319
HMEL003497g2.t1	319
HMEL015202g1.t1	319
HMEL034737g1.t1	319
HmOr41	318
HMEL003338g1.t1	317
HMEL015647g2.t1	316
HMEL003497g3.t1	315

Note. Top 5% nodes were defined as hub genes.

Supplementary Table 15. *OBP20* and its adjacent nodes.

<i>OBP20</i> and its adjacency nodes in <i>H. melpomene</i>			
fromNode	toNode	weight	direction
HmOBP20	HmOr74	0.720226692	undirected
HmOBP20	HmOr71	0.853592549	undirected
HmOBP20	HmOr69	0.712047425	undirected
HmOBP20	HmOr67	0.725793005	undirected
HmOBP20	HmOr64	0.895962059	undirected
HmOBP20	HmOr63	0.738420999	undirected
HmOBP20	HmOr61	0.758970779	undirected
HmOBP20	HmOr59	0.777722254	undirected
HmOBP20	HmOr58	0.886767281	undirected
HmOBP20	HmOr57	0.948402406	undirected
HmOBP20	HmOr56	0.802633483	undirected
HmOBP20	HmOr54	0.766377856	undirected
HmOBP20	HmOr53	0.791640072	undirected
HmOBP20	HmOr51	0.777056703	undirected
HmOBP20	HmOr49	0.847929579	undirected
HmOBP20	HmOr45	0.745505528	undirected
HmOBP20	HmOr44	0.700730706	undirected
HmOBP20	HmOr41	0.850747907	undirected
HmOBP20	HmOr32	0.786034932	undirected
HmOBP20	HmOr30	0.799490978	undirected
HmOBP20	HmOr3	0.831808308	undirected
HmOBP20	HmOr29	0.911430673	undirected
HmOBP20	HmOr28	0.718708868	undirected
HmOBP20	HmOr24	0.788862936	undirected
HmOBP20	HmOr23	0.806324934	undirected
HmOBP20	HmOr22	0.861485321	undirected
HmOBP20	HmOr2	0.970225051	undirected
HmOBP20	HmOr19	0.920236223	undirected
HmOBP20	HmOr14	0.831672664	undirected
HmOBP20	HmOr13	0.912182106	undirected
HmOBP20	HmOr12	0.81085266	undirected
HmOBP20	HmOr10	0.703511725	undirected
HmOBP20	HmOBP6	0.98669448	undirected
HmOBP20	HmOBP51	0.704522091	undirected
HmOBP20	HmOBP47	0.804685829	undirected
HmOBP20	HmOBP38	0.979058187	undirected
HmOBP20	HmOBP3	0.973442141	undirected
HmOBP20	HmOBP21	0.930495265	undirected
HmOBP2	HmOBP20	0.972150702	undirected
HmOBP10	HmOBP20	0.736713756	undirected
HmOBP1	HmOBP20	0.983970019	undirected

HmIR93a	HmOBP20	0.746177189	undirected
HmIR8a	HmOBP20	0.837630118	undirected
HmIR87a	HmOBP20	0.903586879	undirected
HmIR76b	HmOBP20	0.838487615	undirected
HmIR75q1	HmOBP20	0.919922998	undirected
HmIR75p2	HmOBP20	0.810741799	undirected
HmIR64a	HmOBP20	0.738452334	undirected
HmIR41a	HmOBP20	0.827999241	undirected
HmIR31a	HmOBP20	0.881311792	undirected
HmIR25a	HmOBP20	0.811251866	undirected
HmIR21a	HmOBP20	0.829526426	undirected
HmIR1	HmOBP20	0.782612523	undirected
HmelGSTd1.mrna	HmOBP20	0.897566084	undirected
HMEL038025g1.t1	HmOBP20	0.791299195	undirected
HMEL037956g1.t1	HmOBP20	0.86676199	undirected
HMEL037810g1.t1	HmOBP20	0.938508047	undirected
HMEL037671g1.t1	HmOBP20	0.804479702	undirected
HMEL037669g1.t1	HmOBP20	0.775074286	undirected
HMEL037396g1.t1	HmOBP20	0.776611538	undirected
HMEL037099g1.t1	HmOBP20	0.923860343	undirected
HMEL036569g1.t1	HmOBP20	0.854941108	undirected
HMEL036494g1.t3	HmOBP20	0.850251899	undirected
HMEL036494g1.t2	HmOBP20	0.86167149	undirected
HMEL036494g1.t1	HmOBP20	0.877215047	undirected
HMEL036493g1.t1	HmOBP20	0.85646649	undirected
HMEL036394g1.t1	HmOBP20	0.721835339	undirected
HMEL036105g1.t1	HmOBP20	0.766212807	undirected
HMEL036071g1.t1	HmOBP20	0.833055296	undirected
HMEL036054g1.t1	HmOBP20	0.787893993	undirected
HMEL035979g1.t1	HmOBP20	0.816186997	undirected
HMEL035852g1.t1	HmOBP20	0.817879534	undirected
HMEL035799g1.t1	HmOBP20	0.91394269	undirected
HMEL035793g1.t1	HmOBP20	0.794074455	undirected
HMEL035771g1.t1	HmOBP20	0.73575978	undirected
HMEL035431g1.t1	HmOBP20	0.836675183	undirected
HMEL035356g1.t1	HmOBP20	0.838778986	undirected
HMEL035263g1.t1	HmOBP20	0.909783327	undirected
HMEL035254g1.t3	HmOBP20	0.727309542	undirected
HMEL035254g1.t2	HmOBP20	0.814241366	undirected
HMEL035166g1.t1	HmOBP20	0.861489885	undirected
HMEL035158g1.t1	HmOBP20	0.926844413	undirected
HMEL035157g1.t1	HmOBP20	0.857365587	undirected
HMEL035156g1.t1	HmOBP20	0.700599271	undirected
HMEL035065g1.t1	HmOBP20	0.764287646	undirected

HMEL035027g1.t1	HmOBP20	0.734215116	undirected
HMEL034821g1.t2	HmOBP20	0.816052208	undirected
HMEL034623g1.t1	HmOBP20	0.898494129	undirected
HMEL034622g1.t1	HmOBP20	0.885726398	undirected
HMEL034604g1.t1	HmOBP20	0.820975736	undirected
HMEL034496g1.t1	HmOBP20	0.796529421	undirected
HMEL034406g1.t1	HmOBP20	0.721164174	undirected
HMEL034304g1.t1	HmOBP20	0.789022512	undirected
HMEL034303g1.t1	HmOBP20	0.814519703	undirected
HMEL034302g1.t1	HmOBP20	0.844510975	undirected
HMEL034053g1.t1	HmOBP20	0.82675715	undirected
HMEL033955g1.t1	HmOBP20	0.735220896	undirected
HMEL033947g1.t1	HmOBP20	0.807318283	undirected
HMEL033876g1.t1	HmOBP20	0.807098662	undirected
HMEL033849g1.t1	HmOBP20	0.916545455	undirected
HMEL033848g1.t1	HmOBP20	0.980598137	undirected
HMEL033828g1.t1	HmOBP20	0.887097166	undirected
HMEL033611g1.t1	HmOBP20	0.974501729	undirected
HMEL033610g1.t1	HmOBP20	0.931687593	undirected
HMEL033492g1.t1	HmOBP20	0.721056587	undirected
HMEL033309g1.t1	HmOBP20	0.914527478	undirected
HMEL033113g1.t1	HmOBP20	0.933125858	undirected
HMEL033043g1.t1	HmOBP20	0.765556258	undirected
HMEL032790g1.t1	HmOBP20	0.862801296	undirected
HMEL032689g1.t1	HmOBP20	0.85463382	undirected
HMEL032656g1.t1	HmOBP20	0.713925154	undirected
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HMEL032513g1.t1	HmOBP20	0.767297564	undirected
HMEL032509g1.t1	HmOBP20	0.922762142	undirected
HMEL032473g1.t1	HmOBP20	0.771738935	undirected
HMEL032468g1.t1	HmOBP20	0.769724279	undirected
HMEL032397g1.t1	HmOBP20	0.780157543	undirected
HMEL032158g1.t1	HmOBP20	0.790709149	undirected
HMEL032127g1.t1	HmOBP20	0.707074062	undirected
HMEL032063g1.t1	HmOBP20	0.969656984	undirected
HMEL032060g1.t1	HmOBP20	0.771569012	undirected
HMEL031995g1.t2	HmOBP20	0.743990112	undirected
HMEL031813g1.t1	HmOBP20	0.869331813	undirected
HMEL031781g1.t1	HmOBP20	0.765251842	undirected
HMEL031767g1.t1	HmOBP20	0.815486037	undirected
HMEL031680g1.t1	HmOBP20	0.703258916	undirected
HMEL031626g1.t1	HmOBP20	0.762842205	undirected
HMEL031604g1.t1	HmOBP20	0.788101546	undirected
HMEL031592g1.t1	HmOBP20	0.745081444	undirected

HMEL031109g1.t1	HmOBP20	0.853342912	undirected
HMEL031058g1.t5	HmOBP20	0.788020116	undirected
HMEL030985g1.t1	HmOBP20	0.7367596	undirected
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HMEL030014g1.t1	HmOBP20	0.753496537	undirected
HMEL025040g1.t1	HmOBP20	0.787400121	undirected
HMEL022591-RA	HmOBP20	0.818162164	undirected
HMEL022364g1.t3	HmOBP20	0.731823305	undirected
HMEL022364g1.t2	HmOBP20	0.731823305	undirected
HMEL022364g1.t1	HmOBP20	0.731823305	undirected
HMEL021778g1.t1	HmOBP20	0.801799319	undirected
HMEL021639g1.t1	HmOBP20	0.959813083	undirected
HMEL021575g1.t1	HmOBP20	0.912502493	undirected
HMEL021572g1.t1	HmOBP20	0.869539797	undirected
HMEL021313g1.t1	HmOBP20	0.861746639	undirected
HMEL021303g1.t1	HmOBP20	0.862276992	undirected
HMEL020376g1.t1	HmOBP20	0.83898314	undirected
HMEL018037g1.t1	HmOBP20	0.702882831	undirected
HMEL017906g1.t1	HmOBP20	0.720613581	undirected
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HMEL017603g1.t1	HmOBP20	0.838769227	undirected
HMEL017532g1.t1	HmOBP20	0.828236283	undirected
HMEL017528-RA	HmOBP20	0.938281319	undirected
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HMEL017235g1.t3	HmOBP20	0.788386159	undirected
HMEL017212g3.t1	HmOBP20	0.70881514	undirected
HMEL017211g1.t1	HmOBP20	0.749873124	undirected
HMEL017154-RA	HmOBP20	0.89699213	undirected
HMEL017153-RA	HmOBP20	0.888774643	undirected
HMEL017127g1.t9	HmOBP20	0.878431318	undirected
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HMEL017127g1.t3	HmOBP20	0.931360078	undirected
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HMEL017031g1.t1	HmOBP20	0.750559632	undirected
HMEL016985g1.t2	HmOBP20	0.90155228	undirected
HMEL016985g1.t1	HmOBP20	0.852766422	undirected
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HMEL016846g1.t1	HmOBP20	0.834220448	undirected
HMEL016807g1.t1	HmOBP20	0.742032083	undirected
HMEL016787g1.t2	HmOBP20	0.776772754	undirected
HMEL016787g1.t1	HmOBP20	0.871825367	undirected
HMEL016622g2.t1	HmOBP20	0.782646136	undirected
HMEL016622g1.t1	HmOBP20	0.888882918	undirected
HMEL016611g1.t1	HmOBP20	0.773135175	undirected
HMEL016609g1.t1	HmOBP20	0.911245497	undirected
HMEL016603g1.t1	HmOBP20	0.890817234	undirected
HMEL016594g1.t1	HmOBP20	0.887351008	undirected
HMEL016484g1.t1	HmOBP20	0.743319866	undirected
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HMEL016287g1.t1	HmOBP20	0.871996905	undirected
HMEL016193g1.t1	HmOBP20	0.877525451	undirected
HMEL016144g1.t1	HmOBP20	0.758172135	undirected
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HMEL016093g1.t1	HmOBP20	0.775057478	undirected
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HMEL010338g1.t1	HmOBP20	0.864467743	undirected
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HMEL009418g1.t1	HmOBP20	0.872926169	undirected
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HMEL009177g1.t1	HmOBP20	0.866932062	undirected
HMEL009174g1.t1	HmOBP20	0.813715942	undirected

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HMEL009162g1.t1	HmOBP20	0.884685153	undirected
HMEL008985g1.t2	HmOBP20	0.921167081	undirected
HMEL008930g1.t1	HmOBP20	0.708081101	undirected
HMEL008833g1.t1	HmOBP20	0.737610771	undirected
HMEL008603g1.t1	HmOBP20	0.728798778	undirected
HMEL008588g1.t1	HmOBP20	0.788575818	undirected
HMEL008552g1.t1	HmOBP20	0.768923796	undirected
HMEL008507g1.t1	HmOBP20	0.704826431	undirected
HMEL008472g1.t1	HmOBP20	0.930669891	undirected
HMEL008471g6.t1	HmOBP20	0.812013976	undirected
HMEL008423g1.t1	HmOBP20	0.837540543	undirected
HMEL008320g2.t1	HmOBP20	0.975571081	undirected
HMEL008054-RA	HmOBP20	0.716564216	undirected
HMEL008044g1.t1	HmOBP20	0.843436562	undirected
HMEL007962g1.t1	HmOBP20	0.869804702	undirected
HMEL007886g1.t1	HmOBP20	0.745473748	undirected
HMEL007754g1.t1	HmOBP20	0.863821952	undirected
HMEL007500g1.t1	HmOBP20	0.814168393	undirected
HMEL007496g1.t1	HmOBP20	0.849137397	undirected
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HMEL007392g1.t1	HmOBP20	0.704207164	undirected
HMEL007354g1.t3	HmOBP20	0.87079223	undirected
HMEL007353g1.t5	HmOBP20	0.723568193	undirected
HMEL007353g1.t4	HmOBP20	0.881790868	undirected
HMEL007353g1.t3	HmOBP20	0.915578904	undirected
HMEL007353g1.t2	HmOBP20	0.837823478	undirected
HMEL007353g1.t1	HmOBP20	0.766700161	undirected
HMEL007324g1.t1	HmOBP20	0.774251721	undirected
HMEL007233g1.t2	HmOBP20	0.828825504	undirected
HMEL007233g1.t1	HmOBP20	0.783445335	undirected
HMEL007151g1.t1	HmOBP20	0.824180376	undirected
HMEL006935g1.t1	HmOBP20	0.848735914	undirected
HMEL006897g1.t1	HmOBP20	0.872726811	undirected
HMEL006830g1.t1	HmOBP20	0.828799965	undirected
HMEL006712g1.t1	HmOBP20	0.825886107	undirected
HMEL006706g1.t1	HmOBP20	0.79769241	undirected
HMEL006705g1.t1	HmOBP20	0.791345462	undirected
HMEL006690g1.t3	HmOBP20	0.749303132	undirected
HMEL006690g1.t1	HmOBP20	0.718608894	undirected
HMEL006584g1.t1	HmOBP20	0.864416196	undirected
HMEL006583g1.t1	HmOBP20	0.889047846	undirected
HMEL006576g1.t1	HmOBP20	0.732423952	undirected

HMEL006434g1.t1	HmOBP20	0.739203499	undirected
HMEL006371g1.t1	HmOBP20	0.732437924	undirected
HMEL006348g1.t1	HmOBP20	0.771483768	undirected
HMEL006306g1.t1	HmOBP20	0.82165658	undirected
HMEL005774g1.t1	HmOBP20	0.846090377	undirected
HMEL005676g1.t1	HmOBP20	0.905197879	undirected
HMEL005631g1.t1	HmOBP20	0.747937682	undirected
HMEL005601g1.t1	HmOBP20	0.81123706	undirected
HMEL005575g1.t1	HmOBP20	0.70230948	undirected
HMEL005572g1.t1	HmOBP20	0.852852324	undirected
HMEL005541g1.t1	HmOBP20	0.901650473	undirected
HMEL005534g1.t1	HmOBP20	0.773260735	undirected
HMEL005352g1.t1	HmOBP20	0.876357792	undirected
HMEL005318g1.t1	HmOBP20	0.747952353	undirected
HMEL005242g1.t1	HmOBP20	0.74802003	undirected
HMEL005241g1.t1	HmOBP20	0.884497337	undirected
HMEL005232g1.t1	HmOBP20	0.890907162	undirected
HMEL005015g1.t1	HmOBP20	0.862127146	undirected
HMEL005010g1.t1	HmOBP20	0.870788175	undirected
HMEL004951g1.t1	HmOBP20	0.782827613	undirected
HMEL004701g1.t1	HmOBP20	0.882240113	undirected
HMEL004675g1.t1	HmOBP20	0.778041159	undirected
HMEL004586g2.t1	HmOBP20	0.74859246	undirected
HMEL004402g1.t1	HmOBP20	0.892013909	undirected
HMEL004401-RA	HmOBP20	0.7326225	undirected
HMEL004236g1.t1	HmOBP20	0.710722939	undirected
HMEL004084g1.t1	HmOBP20	0.809688822	undirected
HMEL004058g2.t1	HmOBP20	0.800559714	undirected
HMEL004020g1.t1	HmOBP20	0.739506525	undirected
HMEL003975g1.t1	HmOBP20	0.847762871	undirected
HMEL003926g1.t1	HmOBP20	0.720019365	undirected
HMEL003819g1.t1	HmOBP20	0.791745376	undirected
HMEL003764g1.t2	HmOBP20	0.852865343	undirected
HMEL003675g2.t1	HmOBP20	0.837697043	undirected
HMEL003579g1.t1	HmOBP20	0.85848042	undirected
HMEL003538g2.t1	HmOBP20	0.761909572	undirected
HMEL003497g2.t1	HmOBP20	0.773517333	undirected
HMEL003480g1.t1	HmOBP20	0.774197297	undirected
HMEL003338g1.t1	HmOBP20	0.795627864	undirected
HMEL003265g1.t1	HmOBP20	0.840386139	undirected
HMEL003249g1.t1	HmOBP20	0.752600087	undirected
HMEL003232g1.t1	HmOBP20	0.870964037	undirected
HMEL003142g1.t1	HmOBP20	0.764309744	undirected
HMEL002857g1.t1	HmOBP20	0.795523278	undirected

HMEL002665g1.t1	HmOBP20	0.841323479	undirected
HMEL002475g2.t1	HmOBP20	0.739788235	undirected
HMEL002475g1.t1	HmOBP20	0.802872236	undirected
HMEL002471-RA	HmOBP20	0.774147527	undirected
HMEL002452g1.t1	HmOBP20	0.747901355	undirected
HMEL002450g1.t1	HmOBP20	0.80729531	undirected
HMEL002403g1.t1	HmOBP20	0.868415205	undirected
HMEL002390g1.t1	HmOBP20	0.739586208	undirected
HMEL002291g1.t1	HmOBP20	0.710130122	undirected
HMEL002202g1.t1	HmOBP20	0.856330622	undirected
HMEL002199g1.t1	HmOBP20	0.86945506	undirected
HMEL002168g1.t1	HmOBP20	0.854864014	undirected
HMEL002148g1.t1	HmOBP20	0.849228978	undirected
HMEL002016g1.t1	HmOBP20	0.779515781	undirected
HMEL000056g1.t1	HmOBP20	0.823423596	undirected
HmCSP12	HmOBP20	0.879240614	undirected
HmCSP11	HmOBP20	0.918849923	undirected
<i>OBP20 and its adjacency nodes in H. cydno</i>			
fromNode	toNode	weight	direction
HmOBP2	HmOBP20	0.966422709	undirected
HmOBP1	HmOBP20	0.962595015	undirected
HmIR8a	HmOBP20	0.878932808	undirected
HmIR87a	HmOBP20	0.912737665	undirected
HmIR76b	HmOBP20	0.846392018	undirected
HmIR75q2	HmOBP20	0.727711969	undirected
HmIR75q1	HmOBP20	0.93774986	undirected
HmIR75p2	HmOBP20	0.791865951	undirected
HmIR25a	HmOBP20	0.820344926	undirected
HmIR21a	HmOBP20	0.81510015	undirected
HmIR1	HmOBP20	0.714131038	undirected
HmelUGT34A5.mrna	HmOBP20	0.724149606	undirected
HmelGSTd1.mrna	HmOBP20	0.95096439	undirected
HMEL037956g1.t1	HmOBP20	0.846665348	undirected
HMEL037950g1.t1	HmOBP20	0.800819286	undirected
HMEL037810g1.t1	HmOBP20	0.891474286	undirected
HMEL037671g1.t1	HmOBP20	0.854841771	undirected
HMEL037670g1.t1	HmOBP20	0.808098265	undirected
HMEL037669g1.t1	HmOBP20	0.802419894	undirected
HMEL037547g1.t4	HmOBP20	0.859285497	undirected
HMEL037396g1.t1	HmOBP20	0.761342084	undirected
HMEL037290g1.t1	HmOBP20	0.751666641	undirected
HMEL037249g1.t1	HmOBP20	0.761649188	undirected
HMEL037102g1.t1	HmOBP20	0.740460986	undirected
HMEL037099g1.t1	HmOBP20	0.868146746	undirected

HMEL036862g1.t1	HmOBP20	0.963585557	undirected
HMEL036569g1.t1	HmOBP20	0.924172378	undirected
HMEL036494g1.t3	HmOBP20	0.877791184	undirected
HMEL036494g1.t2	HmOBP20	0.853297696	undirected
HMEL036494g1.t1	HmOBP20	0.850037201	undirected
HMEL036493g1.t1	HmOBP20	0.777746513	undirected
HMEL036393g1.t1	HmOBP20	0.708727774	undirected
HMEL036246g1.t1	HmOBP20	0.871533946	undirected
HMEL036105g1.t1	HmOBP20	0.802678354	undirected
HMEL036072g1.t1	HmOBP20	0.716376472	undirected
HMEL036071g1.t1	HmOBP20	0.85104488	undirected
HMEL036054g1.t1	HmOBP20	0.835645778	undirected
HMEL035989g1.t1	HmOBP20	0.756619119	undirected
HMEL035979g1.t1	HmOBP20	0.824325044	undirected
HMEL035852g1.t1	HmOBP20	0.851161372	undirected
HMEL035799g1.t1	HmOBP20	0.895428441	undirected
HMEL035794g1.t1	HmOBP20	0.91792514	undirected
HMEL035793g1.t1	HmOBP20	0.828921785	undirected
HMEL035771g1.t1	HmOBP20	0.729358807	undirected
HMEL035738g1.t1	HmOBP20	0.737309141	undirected
HMEL035601g1.t1	HmOBP20	0.716662686	undirected
HMEL035576g1.t1	HmOBP20	0.738102052	undirected
HMEL035356g1.t1	HmOBP20	0.915852151	undirected
HMEL035285g1.t1	HmOBP20	0.824535249	undirected
HMEL035283g1.t1	HmOBP20	0.807383322	undirected
HMEL035263g1.t1	HmOBP20	0.911900336	undirected
HMEL035254g1.t3	HmOBP20	0.842322658	undirected
HMEL035254g1.t2	HmOBP20	0.867546211	undirected
HMEL035254g1.t1	HmOBP20	0.702180154	undirected
HMEL035166g1.t1	HmOBP20	0.875139595	undirected
HMEL035158g1.t1	HmOBP20	0.84729872	undirected
HMEL035157g1.t1	HmOBP20	0.784528114	undirected
HMEL035065g1.t1	HmOBP20	0.855774024	undirected
HMEL035027g1.t1	HmOBP20	0.774522307	undirected
HMEL034896g1.t1	HmOBP20	0.734025866	undirected
HMEL034864g1.t1	HmOBP20	0.76354079	undirected
HMEL034821g1.t2	HmOBP20	0.800781295	undirected
HMEL034737g1.t1	HmOBP20	0.895251232	undirected
HMEL034735g1.t1	HmOBP20	0.845740397	undirected
HMEL034728g1.t1	HmOBP20	0.898194121	undirected
HMEL034623g1.t1	HmOBP20	0.896422153	undirected
HMEL034622g1.t1	HmOBP20	0.912847284	undirected
HMEL034604g1.t1	HmOBP20	0.79408894	undirected
HMEL034592g1.t1	HmOBP20	0.800884096	undirected

HMEL034496g1.t1	HmOBP20	0.828846261	undirected
HMEL034485g1.t1	HmOBP20	0.83304498	undirected
HMEL034470g1.t1	HmOBP20	0.701069736	undirected
HMEL034303g1.t1	HmOBP20	0.785208339	undirected
HMEL034302g1.t1	HmOBP20	0.923428109	undirected
HMEL034053g1.t1	HmOBP20	0.937244437	undirected
HMEL033955g1.t1	HmOBP20	0.740418507	undirected
HMEL033947g1.t1	HmOBP20	0.803898861	undirected
HMEL033876g1.t1	HmOBP20	0.734128912	undirected
HMEL033852g1.t3	HmOBP20	0.793628804	undirected
HMEL033849g1.t1	HmOBP20	0.932446373	undirected
HMEL033848g1.t1	HmOBP20	0.974430246	undirected
HMEL033828g1.t1	HmOBP20	0.877337806	undirected
HMEL033819g1.t1	HmOBP20	0.738632421	undirected
HMEL033611g1.t1	HmOBP20	0.961243566	undirected
HMEL033610g1.t1	HmOBP20	0.88355836	undirected
HMEL033560g1.t1	HmOBP20	0.82308678	undirected
HMEL033492g1.t1	HmOBP20	0.706159382	undirected
HMEL033309g1.t1	HmOBP20	0.886193631	undirected
HMEL033230g1.t2	HmOBP20	0.75081379	undirected
HMEL033113g1.t1	HmOBP20	0.861738674	undirected
HMEL033043g1.t1	HmOBP20	0.723983397	undirected
HMEL032798g1.t1	HmOBP20	0.703260137	undirected
HMEL032790g1.t1	HmOBP20	0.859113675	undirected
HMEL032656g1.t1	HmOBP20	0.794849497	undirected
HMEL032607g1.t1	HmOBP20	0.843629734	undirected
HMEL032606g1.t1	HmOBP20	0.766901226	undirected
HMEL032559g1.t1	HmOBP20	0.796873172	undirected
HMEL032513g1.t1	HmOBP20	0.799669457	undirected
HMEL032509g1.t1	HmOBP20	0.887944276	undirected
HMEL032473g1.t1	HmOBP20	0.884823489	undirected
HMEL032468g1.t1	HmOBP20	0.773264862	undirected
HMEL032397g1.t1	HmOBP20	0.777904859	undirected
HMEL032360g1.t1	HmOBP20	0.742172128	undirected
HMEL032158g1.t1	HmOBP20	0.842740988	undirected
HMEL032063g1.t1	HmOBP20	0.960635374	undirected
HMEL031995g1.t1	HmOBP20	0.773639579	undirected
HMEL031986g1.t2	HmOBP20	0.710371732	undirected
HMEL031979g1.t1	HmOBP20	0.751285233	undirected
HMEL031813g1.t1	HmOBP20	0.862237005	undirected
HMEL031781g1.t1	HmOBP20	0.886254983	undirected
HMEL031767g1.t1	HmOBP20	0.801413726	undirected
HMEL031680g1.t1	HmOBP20	0.712324915	undirected
HMEL031626g1.t1	HmOBP20	0.736722364	undirected

HMEL031604g1.t1	HmOBP20	0.821409709	undirected
HMEL031526g1.t1	HmOBP20	0.702724343	undirected
HMEL031324g1.t1	HmOBP20	0.734013378	undirected
HMEL031109g1.t1	HmOBP20	0.878444831	undirected
HMEL030987g1.t1	HmOBP20	0.719233589	undirected
HMEL030950g1.t1	HmOBP20	0.914961666	undirected
HMEL030629g1.t1	HmOBP20	0.727405686	undirected
HMEL030379g1.t1	HmOBP20	0.943319721	undirected
HMEL030249g1.t1	HmOBP20	0.779183096	undirected
HMEL030227g1.t1	HmOBP20	0.702518649	undirected
HMEL030026g1.t1	HmOBP20	0.743456521	undirected
HMEL030014g1.t1	HmOBP20	0.841325856	undirected
HMEL022591-RA	HmOBP20	0.812721668	undirected
HMEL022261g2.t1	HmOBP20	0.739556692	undirected
HMEL021778g1.t1	HmOBP20	0.844468962	undirected
HMEL021639g1.t1	HmOBP20	0.918519965	undirected
HMEL021575g1.t1	HmOBP20	0.894227285	undirected
HMEL021572g1.t1	HmOBP20	0.908755411	undirected
HMEL021458g1.t1	HmOBP20	0.76060949	undirected
HMEL021313g1.t1	HmOBP20	0.784630277	undirected
HMEL021303g1.t1	HmOBP20	0.841842624	undirected
HMEL020069g2.t1	HmOBP20	0.836216603	undirected
HMEL020069g1.t1	HmOBP20	0.783204838	undirected
HMEL018072g1.t1	HmOBP20	0.744214458	undirected
HMEL018055g1.t1	HmOBP20	0.70445471	undirected
HMEL018046g1.t1	HmOBP20	0.700687456	undirected
HMEL017692g1.t4	HmOBP20	0.878180743	undirected
HMEL017692g1.t3	HmOBP20	0.805583081	undirected
HMEL017603g1.t1	HmOBP20	0.753083897	undirected
HMEL017532g1.t1	HmOBP20	0.715240802	undirected
HMEL017528-RA	HmOBP20	0.951646129	undirected
HMEL017520g1.t1	HmOBP20	0.876485058	undirected
HMEL017261g1.t1	HmOBP20	0.886582339	undirected
HMEL017235g1.t3	HmOBP20	0.852830878	undirected
HMEL017211g1.t1	HmOBP20	0.702849261	undirected
HMEL017154-RA	HmOBP20	0.892829983	undirected
HMEL017153-RA	HmOBP20	0.816376876	undirected
HMEL017127g1.t9	HmOBP20	0.895237169	undirected
HMEL017127g1.t7	HmOBP20	0.926706288	undirected
HMEL017127g1.t6	HmOBP20	0.847238599	undirected
HMEL017127g1.t3	HmOBP20	0.892861232	undirected
HMEL017127g1.t2	HmOBP20	0.899849783	undirected
HMEL017127g1.t1	HmOBP20	0.844598206	undirected
HMEL017033g1.t1	HmOBP20	0.802395243	undirected

HMEL017031g1.t1	HmOBP20	0.790377561	undirected
HMEL017007g1.t1	HmOBP20	0.762919287	undirected
HMEL016985g1.t2	HmOBP20	0.882545187	undirected
HMEL016985g1.t1	HmOBP20	0.817675013	undirected
HMEL016911g1.t1	HmOBP20	0.752893135	undirected
HMEL016787g1.t2	HmOBP20	0.775532322	undirected
HMEL016787g1.t1	HmOBP20	0.90062292	undirected
HMEL016622g1.t1	HmOBP20	0.902597394	undirected
HMEL016611g1.t1	HmOBP20	0.853278241	undirected
HMEL016609g1.t1	HmOBP20	0.851529045	undirected
HMEL016603g1.t1	HmOBP20	0.843868527	undirected
HMEL016594g1.t1	HmOBP20	0.910597508	undirected
HMEL016484g1.t1	HmOBP20	0.743448915	undirected
HMEL016354g1.t1	HmOBP20	0.805531534	undirected
HMEL016287g1.t1	HmOBP20	0.83539169	undirected
HMEL016193g1.t1	HmOBP20	0.953497009	undirected
HMEL016130g1.t1	HmOBP20	0.764568418	undirected
HMEL016093g1.t1	HmOBP20	0.90823328	undirected
HMEL016082g1.t1	HmOBP20	0.765779806	undirected
HMEL016032g1.t1	HmOBP20	0.852796426	undirected
HMEL015930g1.t1	HmOBP20	0.711296601	undirected
HMEL015899g1.t1	HmOBP20	0.71687037	undirected
HMEL015881g1.t1	HmOBP20	0.718869777	undirected
HMEL015879g1.t1	HmOBP20	0.853222064	undirected
HMEL015841g1.t1	HmOBP20	0.891893543	undirected
HMEL015776g1.t1	HmOBP20	0.887415229	undirected
HMEL015710g1.t1	HmOBP20	0.893790495	undirected
HMEL015651g1.t4	HmOBP20	0.70139322	undirected
HMEL015651g1.t2	HmOBP20	0.887994862	undirected
HMEL015651g1.t1	HmOBP20	0.762608313	undirected
HMEL015647g2.t1	HmOBP20	0.741545121	undirected
HMEL015572g3.t1	HmOBP20	0.768725209	undirected
HMEL015522g1.t1	HmOBP20	0.744955045	undirected
HMEL015247g1.t1	HmOBP20	0.863653732	undirected
HMEL015202g1.t1	HmOBP20	0.772841148	undirected
HMEL015097g1.t1	HmOBP20	0.78423981	undirected
HMEL015079g1.t1	HmOBP20	0.904722557	undirected
HMEL015071g2.t1	HmOBP20	0.739623852	undirected
HMEL015053g1.t1	HmOBP20	0.912101211	undirected
HMEL014795g1.t1	HmOBP20	0.717095092	undirected
HMEL014794g1.t1	HmOBP20	0.859670945	undirected
HMEL014743g1.t1	HmOBP20	0.958200742	undirected
HMEL014736g1.t1	HmOBP20	0.81394084	undirected
HMEL014645g1.t1	HmOBP20	0.768855715	undirected

HMEL014608g1.t1	HmOBP20	0.863633646	undirected
HMEL014575g1.t1	HmOBP20	0.870188643	undirected
HMEL014506g1.t1	HmOBP20	0.842447646	undirected
HMEL014462g1.t1	HmOBP20	0.74039444	undirected
HMEL014389g1.t1	HmOBP20	0.829136445	undirected
HMEL014380g2.t1	HmOBP20	0.809993773	undirected
HMEL014119g1.t1	HmOBP20	0.752807605	undirected
HMEL013933g1.t1	HmOBP20	0.804432104	undirected
HMEL013867g1.t2	HmOBP20	0.898500052	undirected
HMEL013867g1.t1	HmOBP20	0.861131534	undirected
HMEL013676g1.t1	HmOBP20	0.787423694	undirected
HMEL013620g2.t1	HmOBP20	0.861696465	undirected
HMEL013520g4.t1	HmOBP20	0.7788478	undirected
HMEL013515g1.t1	HmOBP20	0.720919234	undirected
HMEL013510g1.t1	HmOBP20	0.863410574	undirected
HMEL013351-RA	HmOBP20	0.885413647	undirected
HMEL013289g1.t1	HmOBP20	0.775553998	undirected
HMEL013221g1.t1	HmOBP20	0.812124943	undirected
HMEL013192g1.t1	HmOBP20	0.753727615	undirected
HMEL013124g1.t1	HmOBP20	0.76748649	undirected
HMEL013099g1.t1	HmOBP20	0.724869933	undirected
HMEL013089g1.t1	HmOBP20	0.927907663	undirected
HMEL013069g1.t1	HmOBP20	0.847376355	undirected
HMEL013055g2.t1	HmOBP20	0.740965923	undirected
HMEL013041g6.t1	HmOBP20	0.807145272	undirected
HMEL013041g1.t1	HmOBP20	0.784372515	undirected
HMEL013040g3.t1	HmOBP20	0.884042821	undirected
HMEL013040g2.t1	HmOBP20	0.874118659	undirected
HMEL012949g1.t1	HmOBP20	0.854483256	undirected
HMEL012901g1.t1	HmOBP20	0.805264996	undirected
HMEL012890g2.t1	HmOBP20	0.723282764	undirected
HMEL012890g1.t1	HmOBP20	0.746795746	undirected
HMEL012628g1.t1	HmOBP20	0.74504909	undirected
HMEL012546g3.t1	HmOBP20	0.748558331	undirected
HMEL012531g1.t1	HmOBP20	0.737046644	undirected
HMEL012516g1.t1	HmOBP20	0.700535883	undirected
HMEL012484g2.t2	HmOBP20	0.703568338	undirected
HMEL012484g2.t1	HmOBP20	0.711595466	undirected
HMEL012423g2.t1	HmOBP20	0.724207016	undirected
HMEL012415g1.t1	HmOBP20	0.723833134	undirected
HMEL012304g1.t2	HmOBP20	0.90990664	undirected
HMEL012304g1.t1	HmOBP20	0.896994879	undirected
HMEL012299g1.t1	HmOBP20	0.886178868	undirected
HMEL012268g1.t1	HmOBP20	0.751690491	undirected

HMEL012214g1.t1	HmOBP20	0.819150223	undirected
HMEL012033g2.t1	HmOBP20	0.731284961	undirected
HMEL011914g2.t1	HmOBP20	0.906461416	undirected
HMEL011914g1.t1	HmOBP20	0.816012272	undirected
HMEL011869g3.t1	HmOBP20	0.867537182	undirected
HMEL011869g2.t1	HmOBP20	0.865659378	undirected
HMEL011814g1.t1	HmOBP20	0.954559193	undirected
HMEL011804g1.t1	HmOBP20	0.924949359	undirected
HMEL011688g1.t1	HmOBP20	0.95701933	undirected
HMEL011624g4.t1	HmOBP20	0.893307555	undirected
HMEL011562g6.t1	HmOBP20	0.921773118	undirected
HMEL011562g1.t1	HmOBP20	0.912993872	undirected
HMEL011473g1.t1	HmOBP20	0.905339044	undirected
HMEL011399g1.t1	HmOBP20	0.7025084	undirected
HMEL011394g1.t1	HmOBP20	0.743230873	undirected
HMEL011326g1.t1	HmOBP20	0.776235691	undirected
HMEL011239g1.t1	HmOBP20	0.72850282	undirected
HMEL011192g1.t1	HmOBP20	0.886680826	undirected
HMEL011007g1.t1	HmOBP20	0.735667916	undirected
HMEL011006g1.t1	HmOBP20	0.706080381	undirected
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HMEL010953g3.t1	HmOBP20	0.766924717	undirected
HMEL010874-RA	HmOBP20	0.718749931	undirected
HMEL010870g1.t1	HmOBP20	0.925767736	undirected
HMEL010825g1.t1	HmOBP20	0.80640548	undirected
HMEL010699g1.t1	HmOBP20	0.756376128	undirected
HMEL010693-RA	HmOBP20	0.748733523	undirected
HMEL010575g1.t2	HmOBP20	0.874811778	undirected
HMEL010362g1.t1	HmOBP20	0.711018499	undirected
HMEL010338g1.t1	HmOBP20	0.874286067	undirected
HMEL010330g1.t1	HmOBP20	0.76713111	undirected
HMEL010272g1.t1	HmOBP20	0.89329224	undirected
HMEL010202g1.t1	HmOBP20	0.764531753	undirected
HMEL010201g1.t1	HmOBP20	0.71597812	undirected
HMEL010164g1.t1	HmOBP20	0.824683618	undirected
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HMEL010071g1.t1	HmOBP20	0.895622789	undirected
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HMEL006254g1.t1	HmOBP20	0.783121979	undirected
HMEL006217g3.t1	HmOBP20	0.707154104	undirected
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HmOBP20	HmOr14	0.901655632	undirected
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