**Supplementary table 1. Primers of** ***H. parallela* antennal UGT genes for quantitative real-time PCR.**

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| Gene ID | Forward primer sequences (5'-3') | Reverse primer sequences (5'-3') | Amplicon length (bp) |
| *HparUGT10995* | ATCCAGGGAGAATCTAAAGCGG | AGCGAAAGGCAGAGGCACA | 279 |
| *HparUGT1265-1* | TGTTCGTCTTCCCATTTCCAA | CTTTCGGTTCCATCGTCCAG | 112 |
| *HparUGT1265-3* | CTGTGGGAAAGACTGAGCAACG | TTGGCTGAAGTGGAACGGC | 199 |
| *HparUGT12965* | TCGTTTCTACCGACAGCCACC | TTGCTCAGCCACTATCGCCG | 168 |
| *HparUGT15028* | CCAATGTACTCAGTCTACCCCCA | CCTCACATCGTTTTCCAGCC | 173 |
| *HparUGT1601-3* | GGGTTTGGAAGGCATACACGA | GGGGGTAGACTGAATGGCGATA | 261 |
| *HparUGT1601-4* | ATTGGATAACGAAAGCGATGGT | GTGCTAAAATATCCGTTTGCGA | 212 |
| *HparUGT1601-6* | ATACACCAACTACGGGCGGA | TAGACCTTGCGGAACATCAGC | 225 |
| *HparUGT1605* | TTCCTCAGCCATTGCCACC | ATCATCGCCATCGTACTTCCA | 236 |
| *HparUGT1630* | GGCAAAGGGCTCGTAACACC | CTTCCTCGGCTTCGTCCAA | 282 |
| *HparUGT1646* | AGACAGAACAACACTACATCCAGCA | CTCTTCGTGACCTACCAATTACTCC | 151 |
| *HparUGT3119* | AATCTGGGGCATTGAAGACACT | GGCGGATTCCCGAAATAGTC | 118 |
| *HparUGT366* | GGAAAGACATCCCGCACTCG | ATAAACCCGTTCTCGCCGC | 196 |
| *HparUGT3727* | ATTAACAGTGAGTCCGATGCCG | GTTGTATGGAAGTGGGAAGGTGA | 246 |
| *HparUGT5658* | GTCATCAGAAAATGGTGCCCG | GCTTAGTGCCCCGTTGTGTGT | 84 |
| *HparUGT5694* | GCTTTTAGACGATCCGAGTTACAGT | AAGAAGATTAGTCCGACATCCACC | 201 |
| *HparUGT7488* | CGTATCCTTTTTCAACCGATTCTG | CATCACGCATGGTGGTCTTCTC | 122 |
| *HparUGT8131* | TTCTCGTAAGTCGGGAGCGTC | CCGTTTAGCACAGTTCCTCACAT | 225 |
| *HparUGT8312* | TCGGTGATCGTTATGTCCCTGTA | GGGTGAGACGGTGTTCAAAGAGT | 111 |
| *HparUGT9114* | TAGAAAGCAGCGGGGGTGG | CGCAGAACGCAGATGAGGAG | 218 |