

# Supplementary Materials: RNA-Seq Analyses for Two Silkworm Strains Reveals Insight into Their Susceptibility and Resistance to *Beauveria bassiana* Infection

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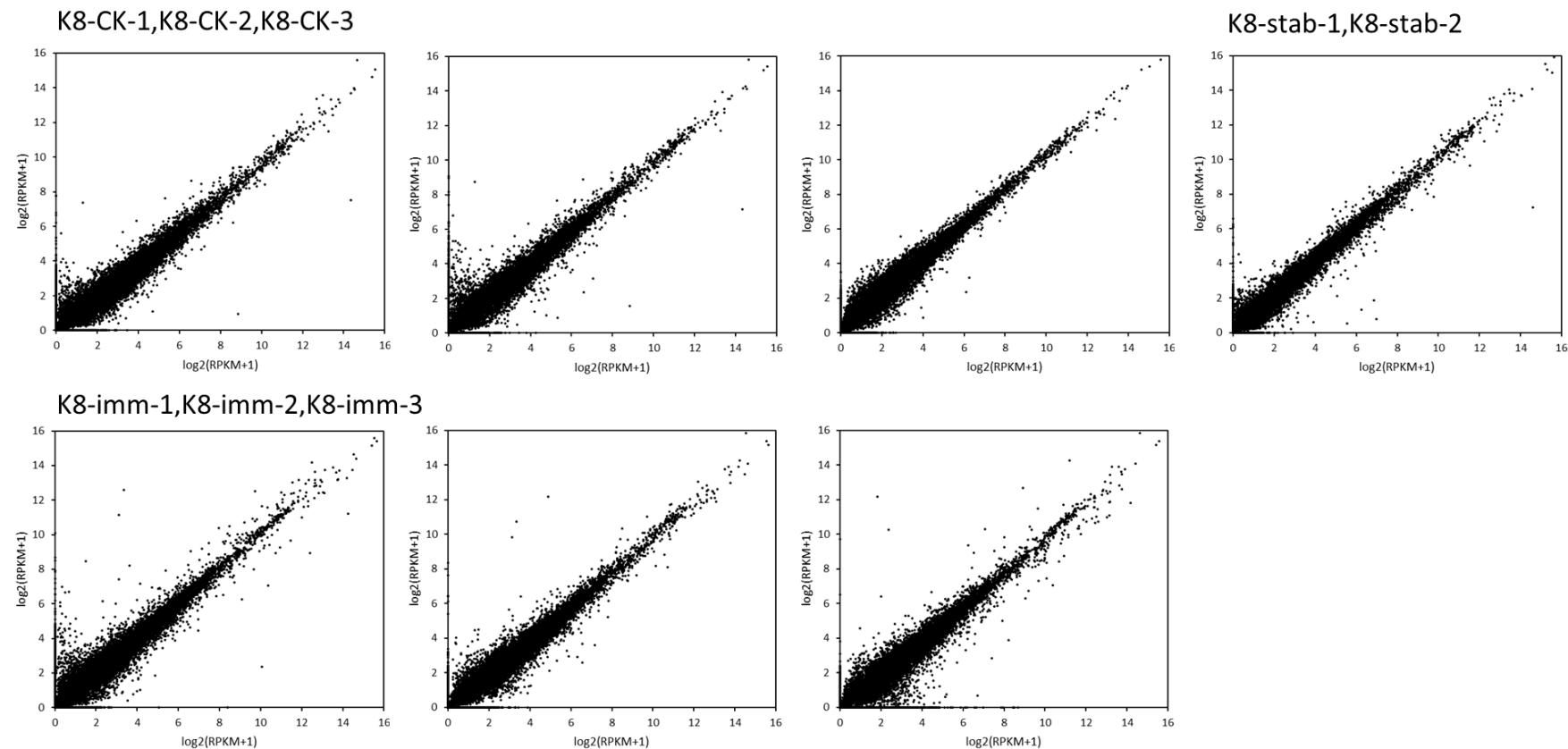
**Table S1.** Classification of the differently expressed genes (DEGs).

| DEG Class  | Immersion |    | Injection |    | Description                                   |
|--|-----------|----|-----------|----|---|
|  | HY        | K8 | HY        | K8 |   |
| Peptidase  | 6         | 4  | 21        | 5  | Peptidase                                     |
| Lipoprotein  | 6         | 7  | 10        | 4  | Lepidopteran low molecular weight lipoprotein |
| Protease inhibitor (PI)  | 2         | 6  | 8         | 8  | Protease inhibitor                            |
| Major facilitator superfamily (MFS)                                  | 4         | 0  | 11        | 4  | Major facilitator superfamily                 |
| cuticle protein  | 8         | 4  | 6         | 8  | cuticle protein                               |
| Antimicrobial peptide (AMP)AMP                                       | 9         | 1  | 7         | 10 | antimicrobial peptide                         |
| Pheromone binding protein/general odorant binding protein (PBP/GOBP) | 3         | 5  | 5         | 2  | Insect pheromone/odorant binding protein      |
| Kinase   | 3         | 1  | 4         | 6  | kinase  |
| Glycoside hydrolase  | 4         | 1  | 4         | 2  | Glycoside hydrolase                           |
| Tubulin  | 3         | 0  | 6         | 8  | tubulin                                       |
| Lipase   | 3         | 1  | 8         | 1  | Lipase  |
| Short-chain dehydrogenase/reductase (SDR)                            | 0         | 0  | 6         | 2  | Short-chain dehydrogenase/reductase           |
| Cytochrome P450  | 0         | 0  | 3         | 4  | Cytochrome P450                               |
| Immunoglobulin (Ig)  | 1         | 0  | 5         | 3  | Immunoglobulin                                |
| Heat shock protein (HSP)   | 3         | 2  | 2         | 3  | Heat shock protein                            |
| Zinc finger  | 0         | 0  | 4         | 2  | Zinc finger                                   |
| Cytochrome   | 1         | 0  | 1         | 3  | Cytochrome                                    |
| Cellular retinaldehyde-binding protein                               | 0         | 0  | 4         | 1  | Cellular retinaldehyde-binding protein        |
| Carboxylesterase   | 0         | 0  | 3         | 3  | Carboxylesterase                              |
| Glycosyl hydrolase   | 2         | 0  | 2         | 1  | Glycosyl hydrolase                            |
| Epidermal growth factor (EGF)  | 0         | 0  | 3         | 3  | Epidermal growth factor                       |
| Chorion protein  | 1         | 1  | 4         | 3  | chorion protein                               |
| Chitin binding Peritrophin-A   | 2         | 1  | 0         | 2  | Chitin binding Peritrophin-A                  |
| ATPase   | 1         | 0  | 2         | 2  | ATPase  |
| Peptidoglycan recognition protein (PGRP)                             | 1         | 1  | 1         | 1  | Peptidoglycan recognition protein             |
| Juvenile hormone   | 2         | 0  | 1         | 0  | juvenile hormone                              |
| Storage protein  | 0         | 2  | 1         | 1  | Storage protein                               |
| Haem peroxidase  | 0         | 2  | 0         | 3  | Haem peroxidase                               |
| Cyclin   | 1         | 1  | 3         | 2  | Cyclin  |
| Transketolase  | 2         | 0  | 0         | 0  | Transketolase                                 |
| Sterile  | 0         | 0  | 2         | 0  | Sterile                                       |
| Ribosomal protein  | 0         | 0  | 1         | 1  | Ribosomal protein                             |
| Fibronectin  | 1         | 0  | 1         | 0  | Fibronectin                                   |
| Fibroin  | 0         | 0  | 0         | 2  | fibroin                                       |
| Ecdysone oxidase   | 0         | 1  | 0         | 2  | Ecdysone oxidase                              |
| Dynein light chain LC8-type (DYNLL)                                  | 0         | 0  | 1         | 1  | dynein light chain LC8-type                   |
| Cytosolic fatty-acid binding   | 0         | 0  | 2         | 0  | Cytosolic fatty-acid binding                  |
| C-type lectin  | 0         | 0  | 1         | 1  | C-type lectin                                 |
| Caspase  | 0         | 0  | 1         | 1  | caspase                                       |
| Carbonic anhydrase   | 0         | 0  | 2         | 1  | Carbonic anhydrase                            |
| Aminotransferase   | 0         | 0  | 1         | 1  | Aminotransferase                              |
| Aldehyde dehydrogenase   | 0         | 0  | 1         | 1  | Aldehyde dehydrogenase                        |
| Acyltransferase  | 0         | 0  | 2         | 1  | Acyltransferase                               |

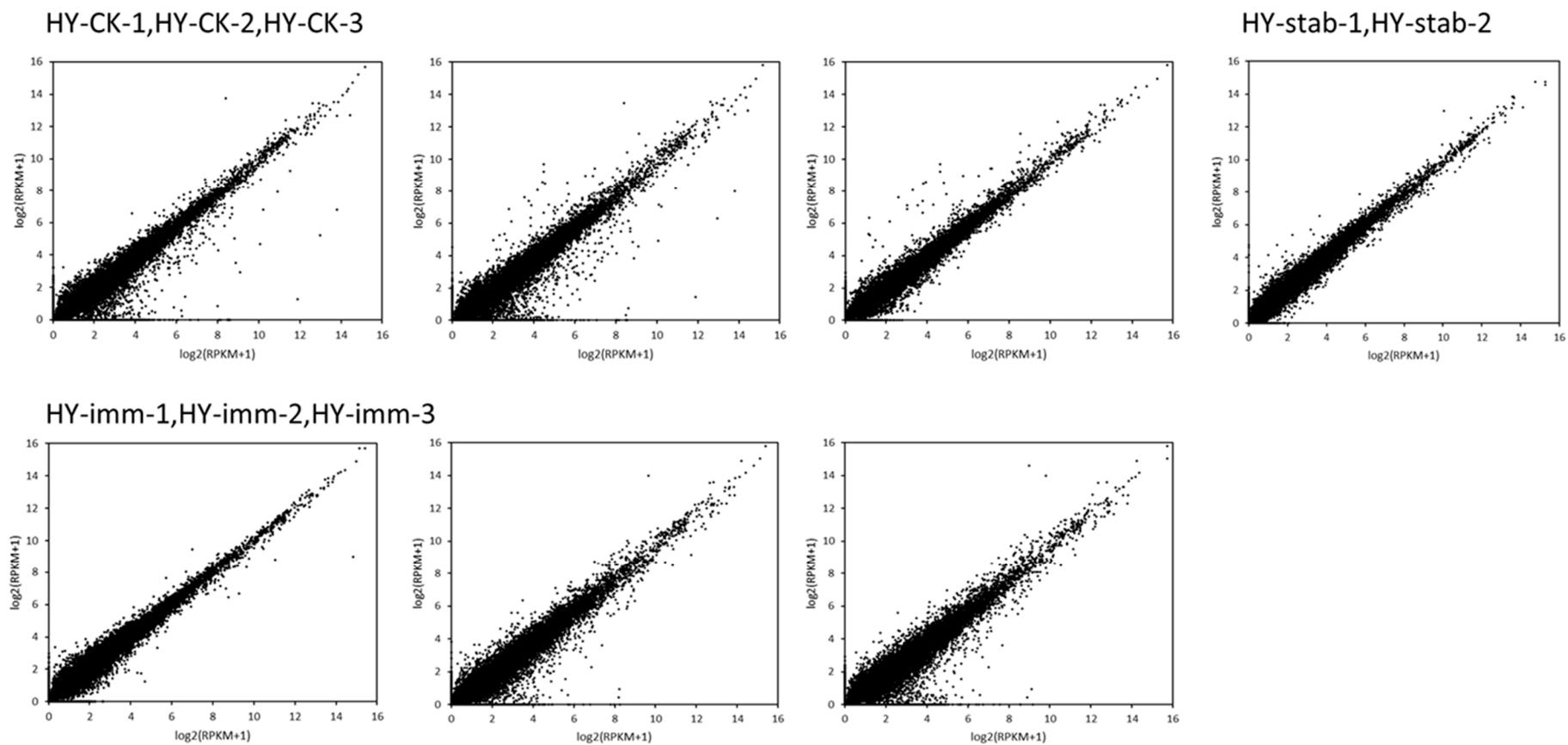
**Table S2.** Quantitative reverse transcription PCR (qRT-PCR) primers and results.**Table S3.** List of differentially expressed genes.**Table S4.** Results of Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway enrichment analysis.

|           | HY-CK-1 | HY-CK-2 | HY-CK-3 | HY-imm-1 | HY-imm-2 | HY-imm-3 | HY-stab1 | HY-stab2 | K8-CK-1 | K8-CK-2 | K8-CK-3 | K8-imm-1 | K8-imm-2 | K8-imm-3 | K8-stab1 | K8-stab2 |
|-----------|---------|---------|---------|----------|----------|----------|----------|----------|---------|---------|---------|----------|----------|----------|----------|----------|
| HY-CK-1   | 1       | 0.92    | 0.91    | 0.95     | 0.89     | 0.91     | 0.89     | 0.88     | 0.87    | 0.74    | 0.84    | 0.86     | 0.85     | 0.81     | 0.82     | 0.85     |
| HY-CK-2   | 0.92    | 1       | 0.98    | 0.9      | 0.85     | 0.97     | 0.93     | 0.92     | 0.89    | 0.83    | 0.87    | 0.89     | 0.89     | 0.87     | 0.86     | 0.84     |
| HY-CK-3   | 0.91    | 0.98    | 1       | 0.85     | 0.81     | 0.95     | 0.93     | 0.94     | 0.88    | 0.86    | 0.89    | 0.86     | 0.87     | 0.88     | 0.85     | 0.86     |
| HY-imm-1  | 0.95    | 0.9     | 0.85    | 1        | 0.94     | 0.92     | 0.86     | 0.81     | 0.89    | 0.67    | 0.81    | 0.9      | 0.89     | 0.78     | 0.84     | 0.83     |
| HY-imm-2  | 0.89    | 0.85    | 0.81    | 0.94     | 1        | 0.88     | 0.88     | 0.77     | 0.92    | 0.65    | 0.81    | 0.93     | 0.94     | 0.79     | 0.86     | 0.84     |
| HY-imm-3  | 0.91    | 0.97    | 0.95    | 0.92     | 0.88     | 1        | 0.94     | 0.93     | 0.93    | 0.85    | 0.92    | 0.93     | 0.89     | 0.91     | 0.9      | 0.87     |
| HY-stab-1 | 0.89    | 0.93    | 0.93    | 0.86     | 0.88     | 0.94     | 1        | 0.94     | 0.92    | 0.81    | 0.89    | 0.92     | 0.89     | 0.89     | 0.92     | 0.89     |
| HY-stab-2 | 0.88    | 0.92    | 0.94    | 0.81     | 0.77     | 0.93     | 0.94     | 1        | 0.86    | 0.93    | 0.93    | 0.83     | 0.8      | 0.93     | 0.84     | 0.87     |
| K8-CK-1   | 0.87    | 0.89    | 0.88    | 0.89     | 0.92     | 0.93     | 0.92     | 0.86     | 1       | 0.78    | 0.9     | 0.99     | 0.93     | 0.89     | 0.95     | 0.89     |
| K8-CK-2   | 0.74    | 0.83    | 0.86    | 0.67     | 0.65     | 0.85     | 0.81     | 0.93     | 0.78    | 1       | 0.95    | 0.75     | 0.71     | 0.95     | 0.74     | 0.81     |
| K8-CK-3   | 0.84    | 0.87    | 0.89    | 0.81     | 0.81     | 0.92     | 0.89     | 0.93     | 0.9     | 0.95    | 1       | 0.88     | 0.85     | 0.99     | 0.89     | 0.94     |
| K8-imm-1  | 0.86    | 0.89    | 0.86    | 0.9      | 0.93     | 0.93     | 0.92     | 0.83     | 0.99    | 0.75    | 0.88    | 1        | 0.95     | 0.88     | 0.94     | 0.87     |
| K8-imm-2  | 0.85    | 0.89    | 0.87    | 0.89     | 0.94     | 0.89     | 0.89     | 0.8      | 0.93    | 0.71    | 0.85    | 0.95     | 1        | 0.84     | 0.91     | 0.88     |
| K8-imm-3  | 0.81    | 0.87    | 0.88    | 0.78     | 0.79     | 0.91     | 0.89     | 0.93     | 0.89    | 0.95    | 0.99    | 0.88     | 0.84     | 1        | 0.89     | 0.92     |
| K8-stab-1 | 0.82    | 0.86    | 0.85    | 0.84     | 0.86     | 0.9      | 0.92     | 0.84     | 0.95    | 0.74    | 0.89    | 0.94     | 0.91     | 0.89     | 1        | 0.94     |
| K8-stab-2 | 0.85    | 0.84    | 0.86    | 0.83     | 0.84     | 0.87     | 0.89     | 0.87     | 0.89    | 0.81    | 0.94    | 0.87     | 0.88     | 0.92     | 0.94     | 1        |

**Figure S1.** Pearson correlation among samples. Different colors indicate the degree of correlation among samples.



**Figure 2. Cont.**



**Figure S2.** Scatter plot of gene expression of biological repeats.