

Comparative transcriptome profiling and co-expression network analysis uncover the key genes

associated with early-stage resistance to *Aspergillus flavus* in maize

Huanhuan Liu<sup>\$1</sup>, Haofeng Wu<sup>\$1</sup>, Yan Wang<sup>1</sup>, Huan Wang<sup>1</sup>, Saihua Chen<sup>1\*</sup>, Zhitong Yin<sup>1\*</sup>

1, Jiangsu Key Laboratory of Crop Genetics and Physiology/Co-Innovation Center for Modern Production Technology of Grain Crops/Key Laboratory of Plant Functional Genomics of the Ministry of Education/Joint International Research Laboratory of Agriculture & Agri-Product Safety of the Ministry of Education, Yangzhou University, Yangzhou, 225009, China.

\$ These authors contributed equally

\*Corresponding author:

Zhitong Yin (ztyin@yzu.edu.cn)

Saihua Chen (chensaihua@yzu.edu.cn)

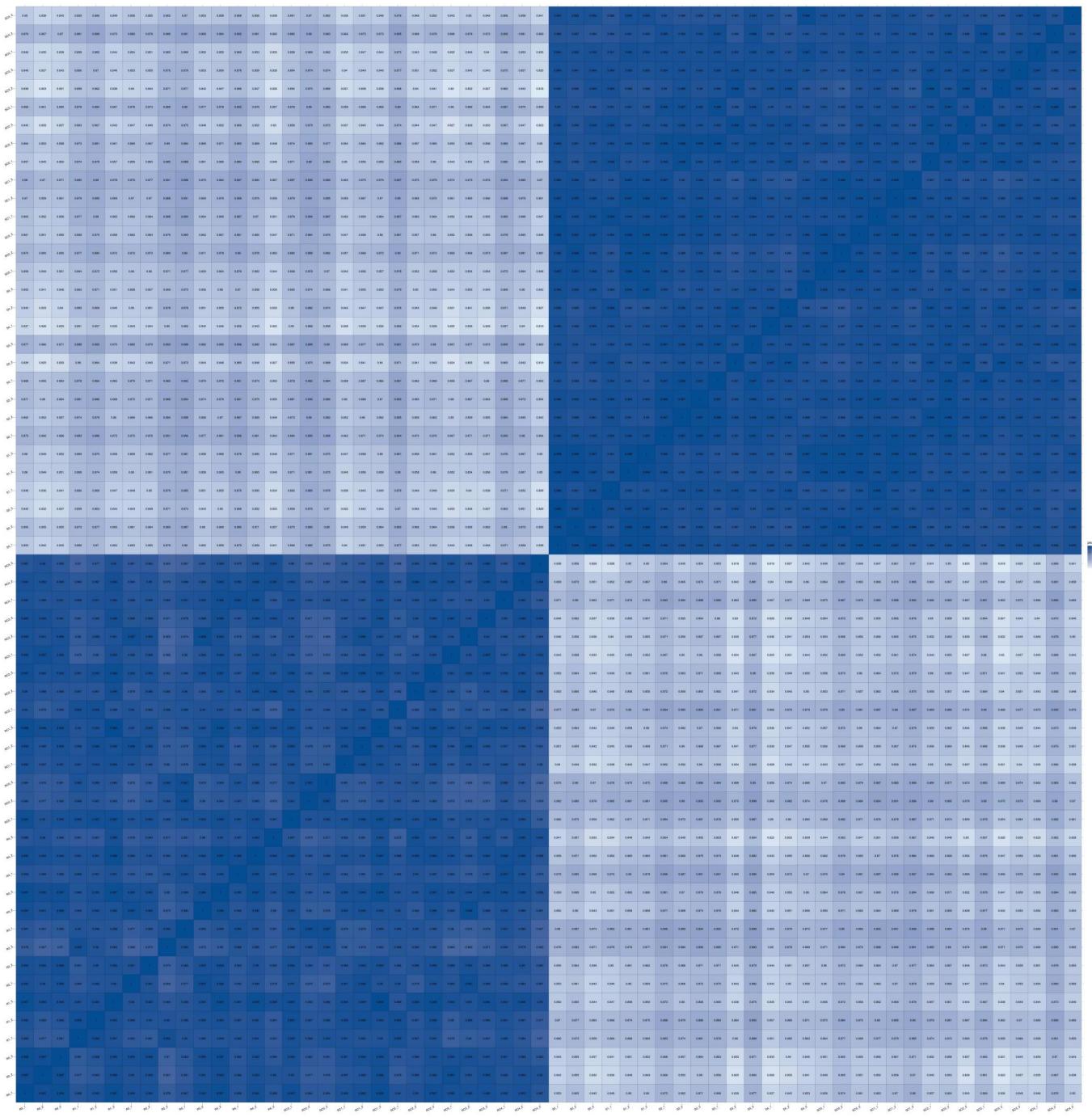
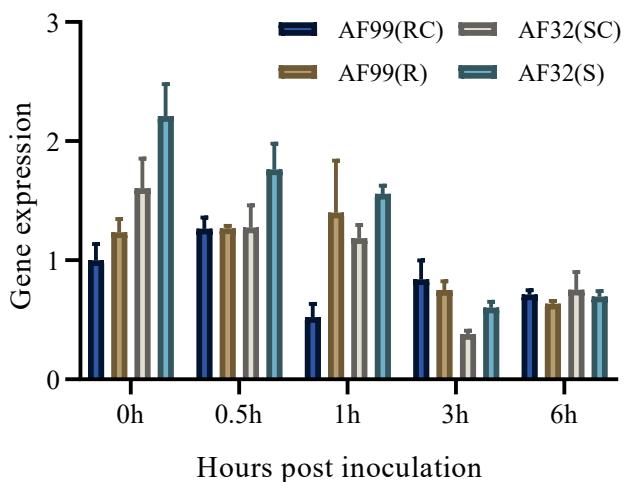


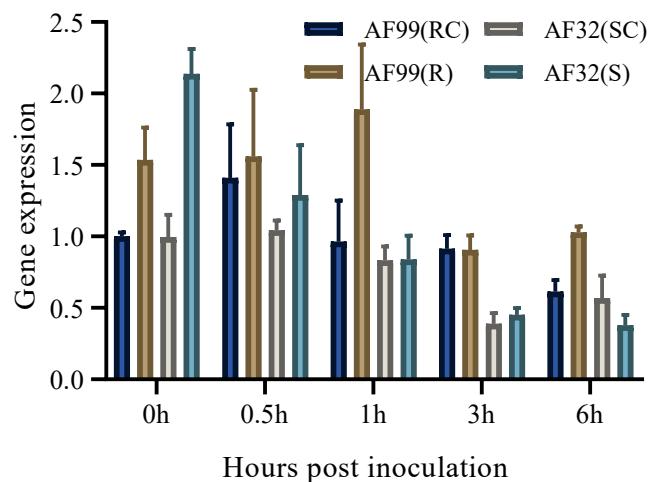
Figure S1. Pair-wise Pearson's correlation coefficients of the sequencing data of 60 samples.

**a**

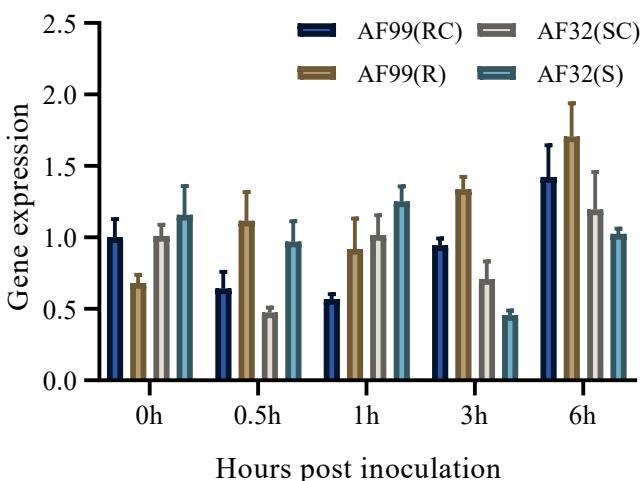
LOC109939959

**b**

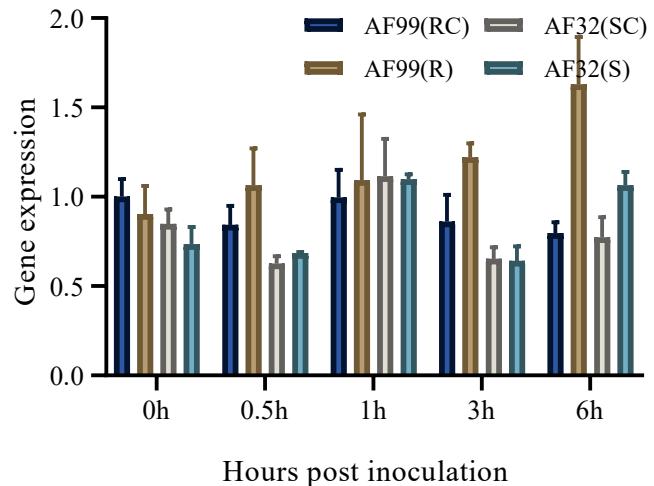
LOC103631592

**c**

LOC103650090

**d**

LOC100193804

**e**

LOC103636223

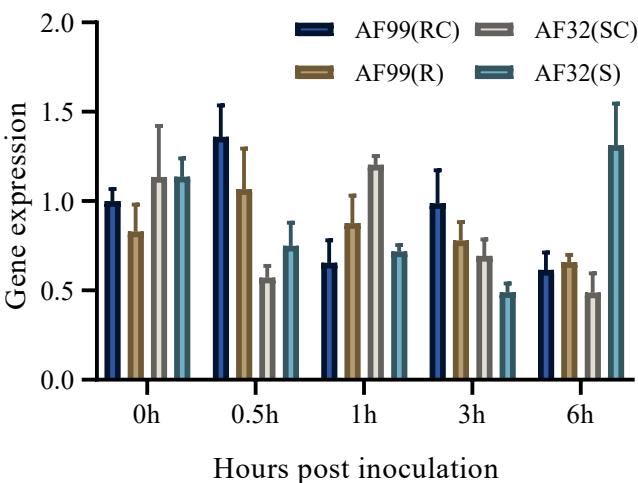


Figure S2. Dynamic expression patterns of genes during infection by real-time RT-PCR.

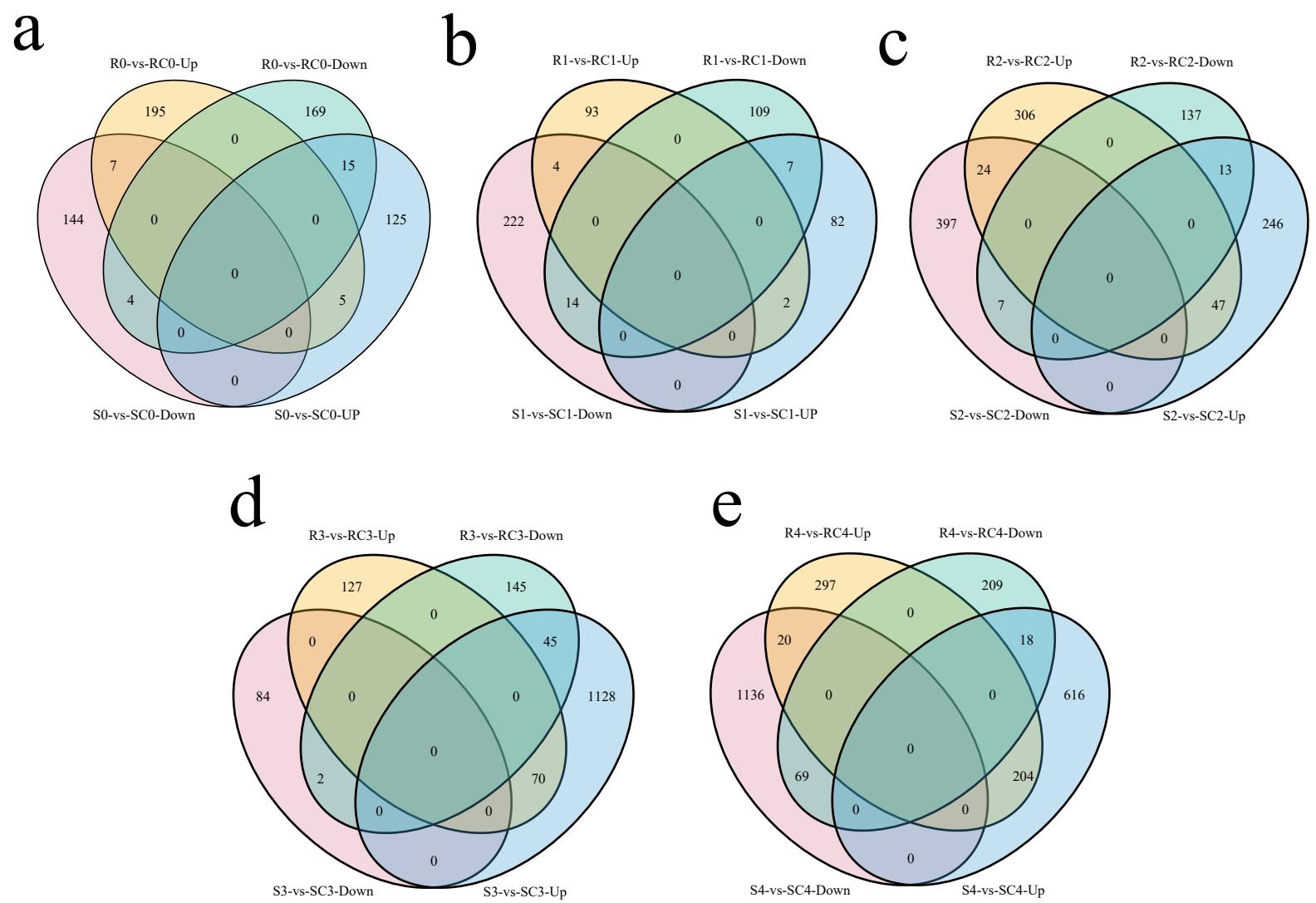


Figure S3. Venn diagrams of specific and common DEGs responding to *A. flavus* in AF99 and AF32 (infection vs. mock-treatment) at different time points (a, 0 hpi; b, 0.5 hpi; c, 1.5 hpi; d, 3 hpi; e, 6 hpi).

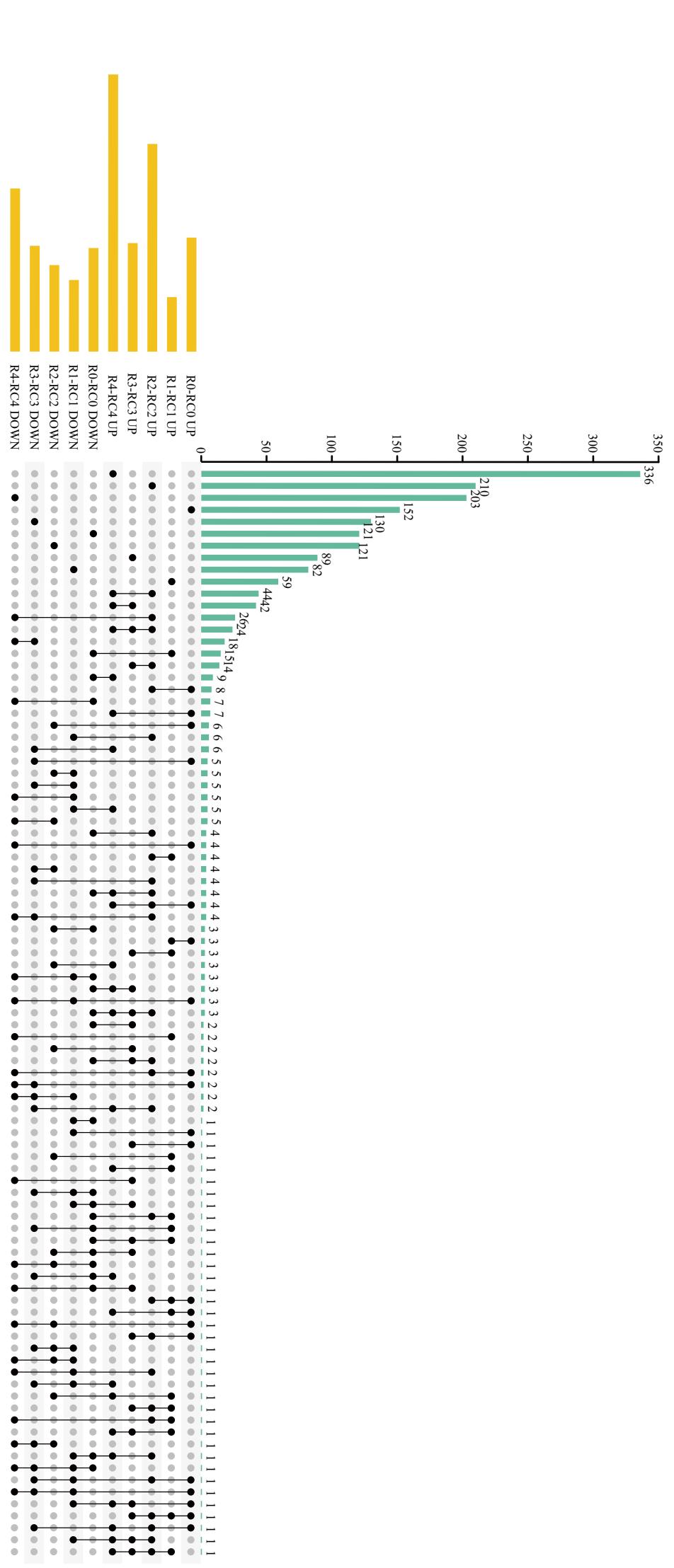


Figure S4. Venn diagram of up-regulated and down-regulated DEGs at different time points in AF99.

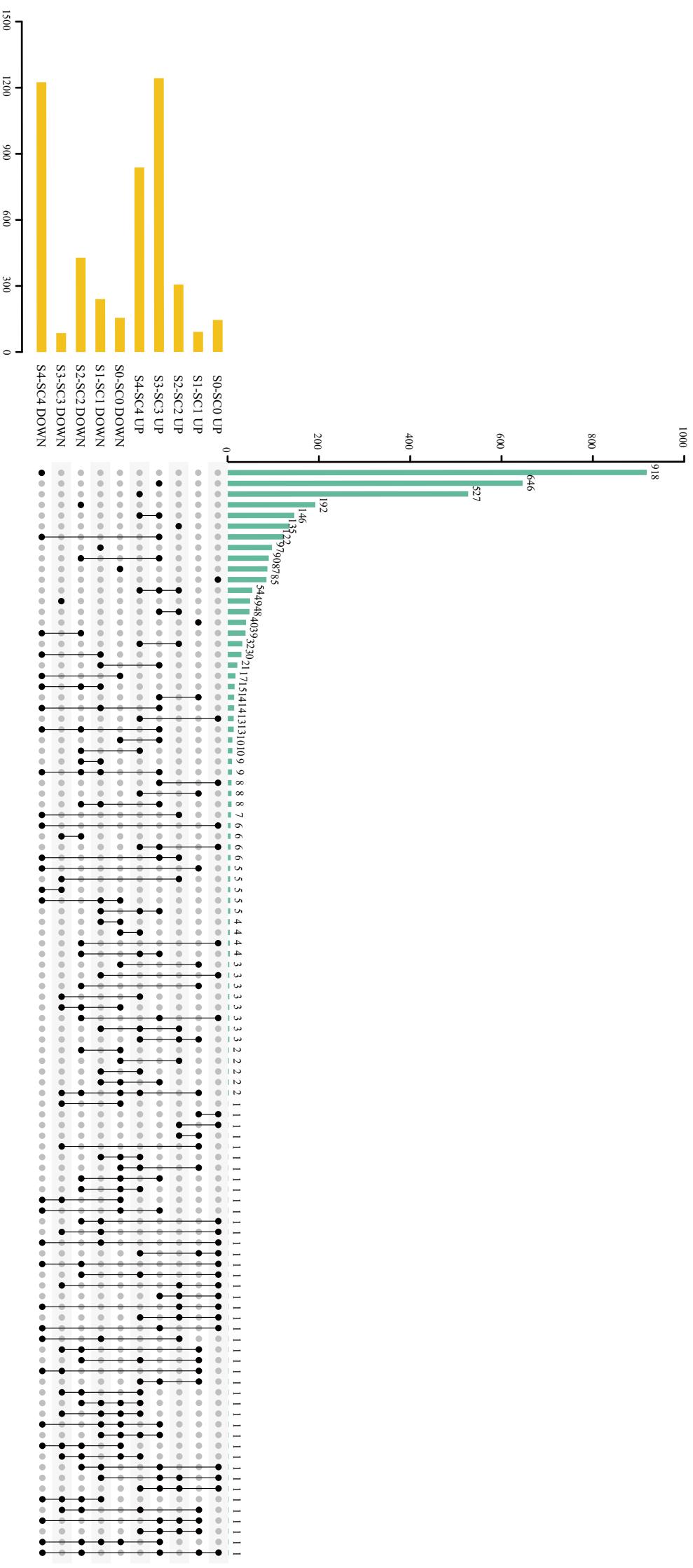


Figure S5. Venn diagram of up-regulated and down-regulated DEGs at different time points in AF32.

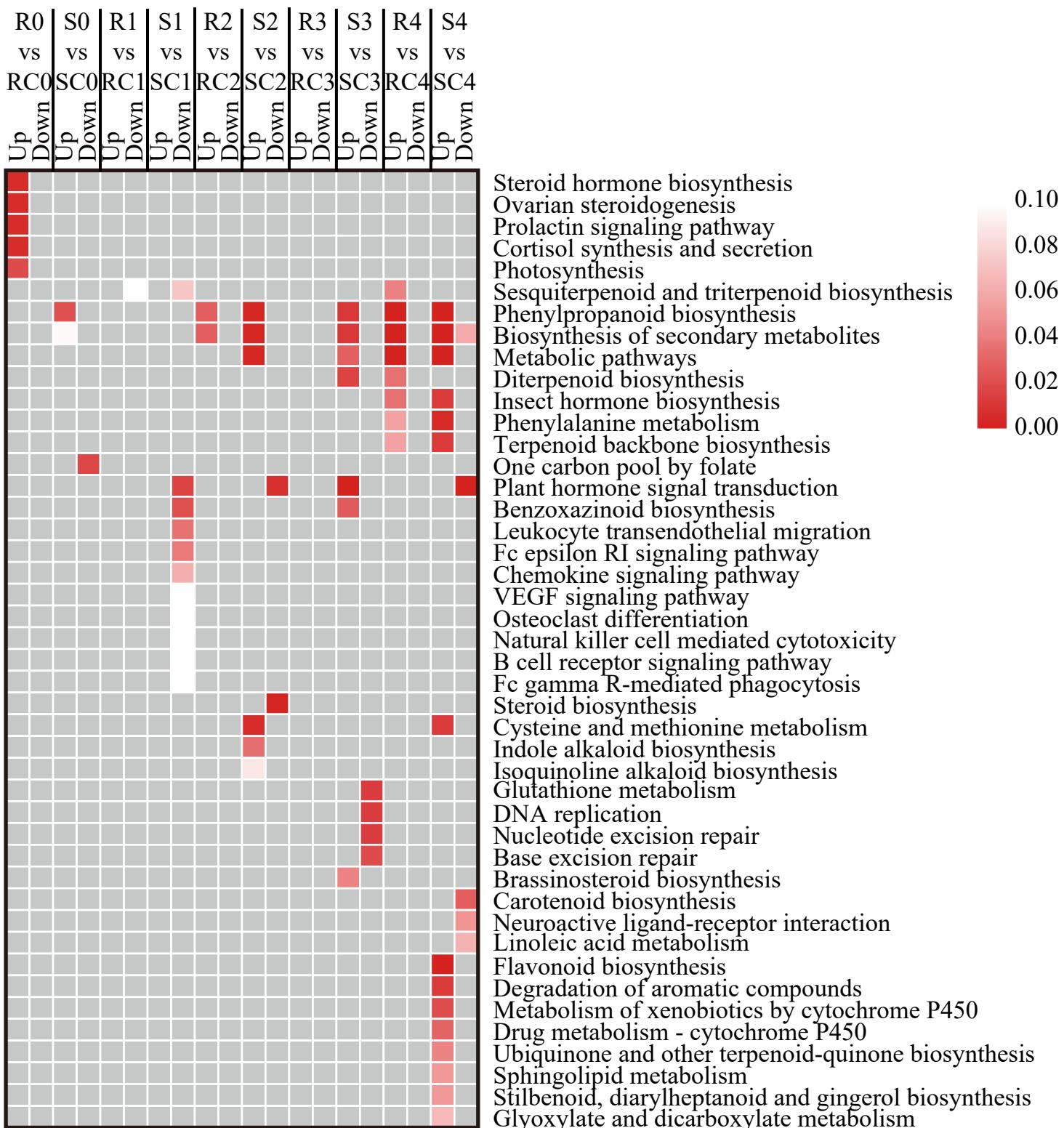
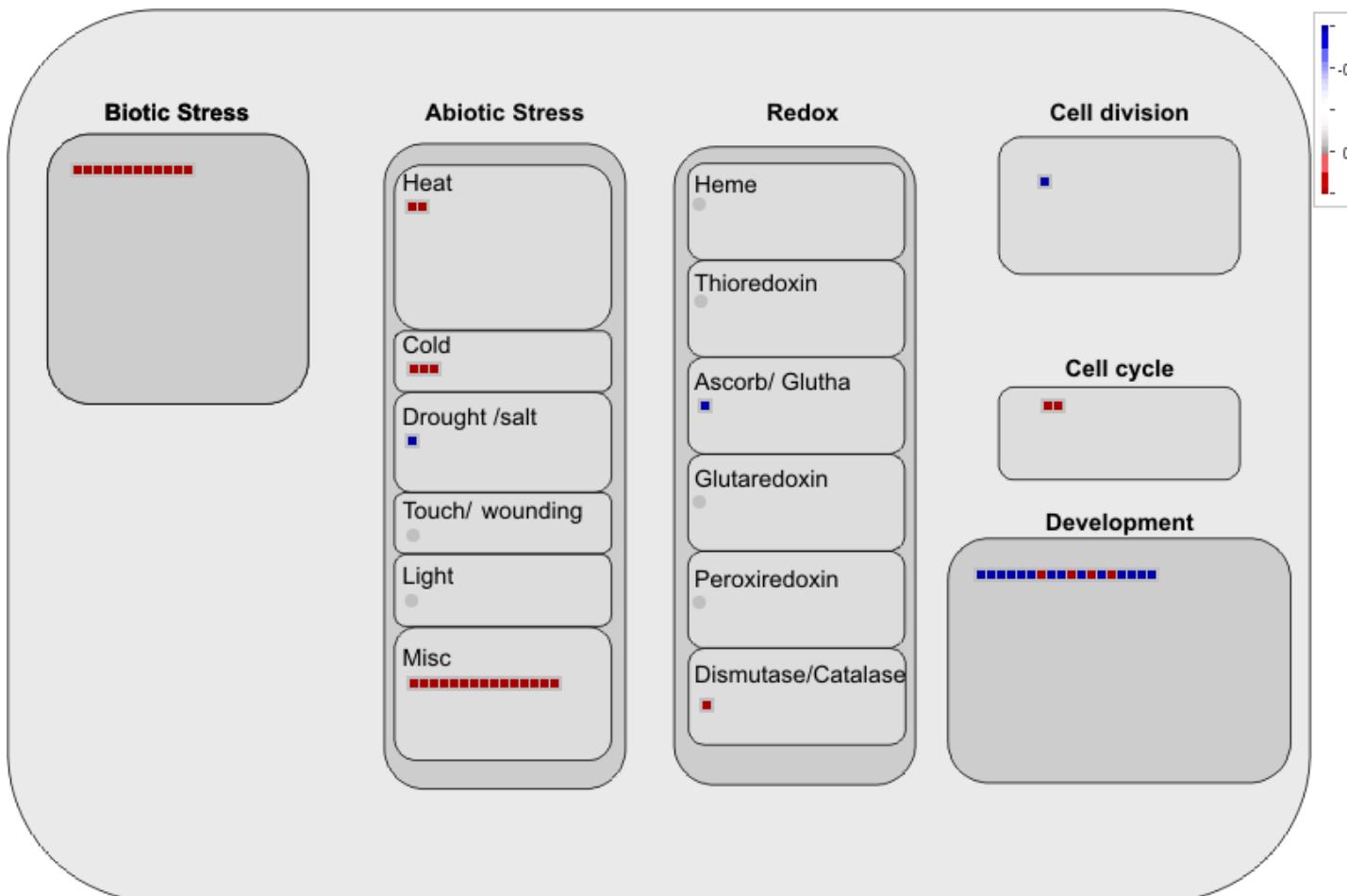


Figure S6. KEGG pathways enriched in down- and up-regulated genes responding to *A. flavus* in AF99 and AF32 (infection vs. mock-treatment) at different time points. Color depth represents the corrected p-value.

a



b

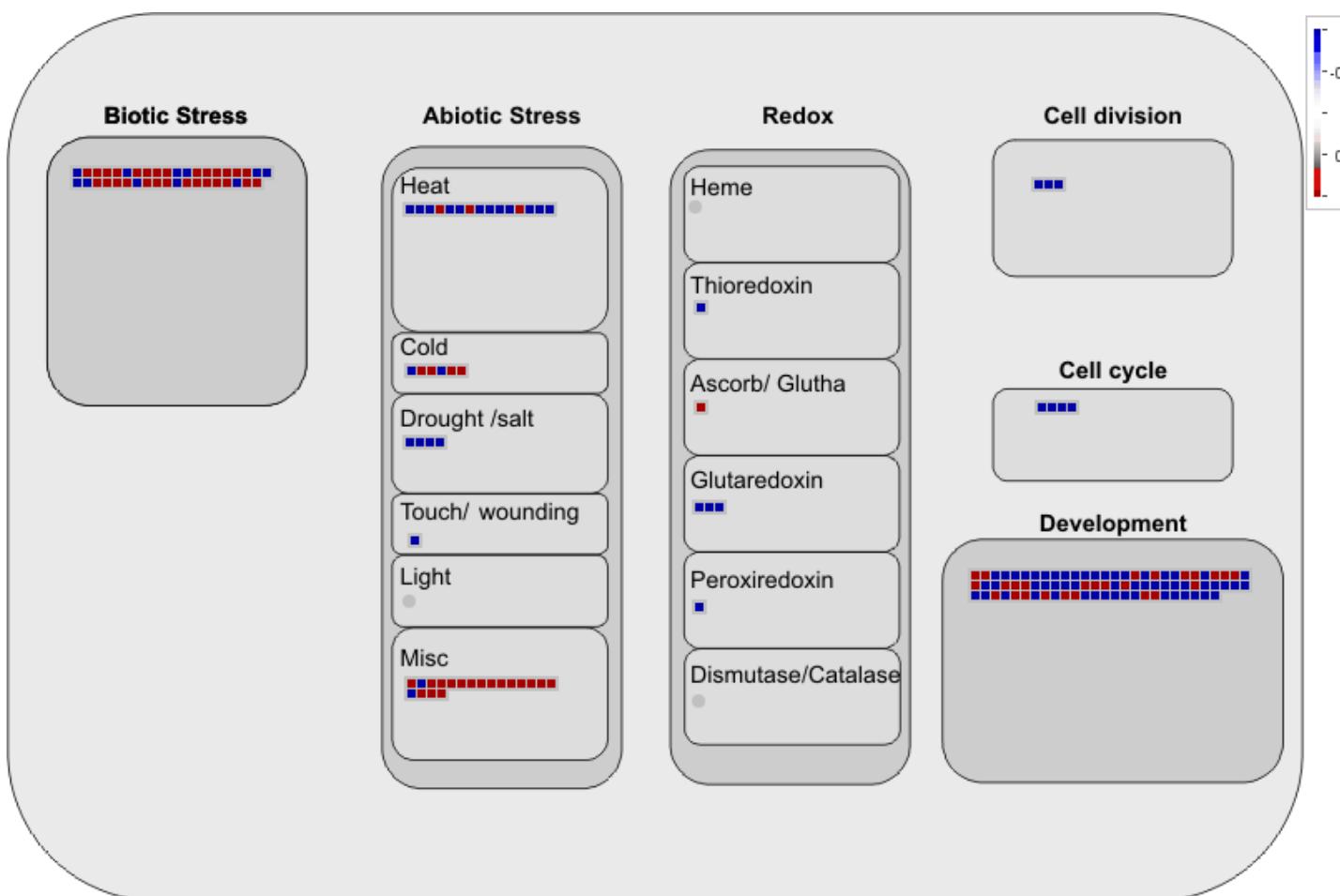


Figure S7. MapMan-based visualization of an overview of the cellular response at the T4 stage in AF99(a) and AF32(b).