

## Description of Additional Supplementary Files

**File name:** Supplementary Data 1

**Description:** Detailed overview of *Cryptotermes secundus* (Isoptera, Kalotermitidae) samples used for RNAseq analyses, sorted by experiment.

**File name:** Supplementary Data 2

**Description:** Differentially expressed genes (DEGs) (after FDR correction) (A) between queens and workers of the queen network experiment; (B) between control & precocene-treated queens of the JH manipulation experiment; (C) between control and acetone-treated queens of the JH manipulation experiment; (D) between acetone & precocene-treated queens of the JH manipulation experiment.

**File name:** Supplementary Data 3

**Description:** Modules of the WGCNA. (A) 176 modules of the queen network experiment aimed to characterize queens versus workers; (B) 224 modules of the precocene-effect analysis: precocene-treated queens versus control queens; (C) 219 modules of the solvent effect analysis: solvent treated queens versus control queens; (D) 216 modules of the analysis aimed to disentangle the JH effect: Precocene versus solvent treated queens.

**File name:** Supplementary Data 4

**Description:** List of the 99 TI-J-LiFe genes (for TOR/IIS-JH-Lifespan and Fecundity). This is a list of genes from the TI-J-LiFe network that combines all major pathways underlying aging and life history trade-offs. This list was originally generated for *D. melanogaster* (see Main text).

**File name:** Supplementary Data 5

**Description:** KEGG enrichment results for all modules from different WGCNA comparisons. (A) Queen network experiment: queens versus workers; (B) Precocene effect: precocene-treated queens versus control queens; (C) Solvent effect: solvent treated queens versus control queens; (D) JH effect: Precocene versus solvent treated queens.

**File name:** Supplementary Data 6

**Description:** Gene ontology (GO) enrichment results for all modules from different WGCNA. (A) Queen network experiment: queens versus workers; (B) Precocene effect: precocene-treated queens versus control queens; (C) Solvent effect: solvent treated queens versus control queens; (D) JH effect: Precocene versus solvent treated queens.

**File name:** Supplementary Data 7

**Description:** Results of Blast searches against the cockroach *Blattella germanica* and the termite *Zootermopsis nevadensis*.