# Supplementary materials for: *Solanum nigrum* fruit extract modulates immune system activity of mealworm beetle, *Tenebrio molitor* L.

**Table S1.** Primers used in the study

| Name | Forward primer | Reverse primer | References |
|---|---|---|---|
| **Cecropin** | ATGGACAACCAATGCCACCC | GGTCTTCGATTCCGTTGCCT | Jacobs et al. 2017 |
| **Tenecin-3** | CATCACGACGGACATCTGGG | TAAATGTCCGCCTGGTTGGC | Jacobs et al. 2017 |
| **Toll** | TGCGTAGCAAACAGGTGGAT | TCGCGTAGCGGTAGTAGAGA | Jacobs et al. 2017 |
| **RPL13a** | TCGTCGTGAGATGCGAACAA | CTGCTTCCCACGTTCTGTCT | Jacobs et al. 2017 |

**References**

Jacobs, C.G., J.D. Gallagher, S.E. Evison, D.G. Heckel, A. Vilcinskas, and H. Vogel. 2017. Endogenous egg immune defenses in the yellow mealworm beetle (*Tenebrio molitor*). *Developmental & Comparative Immunology* 70:1-8.

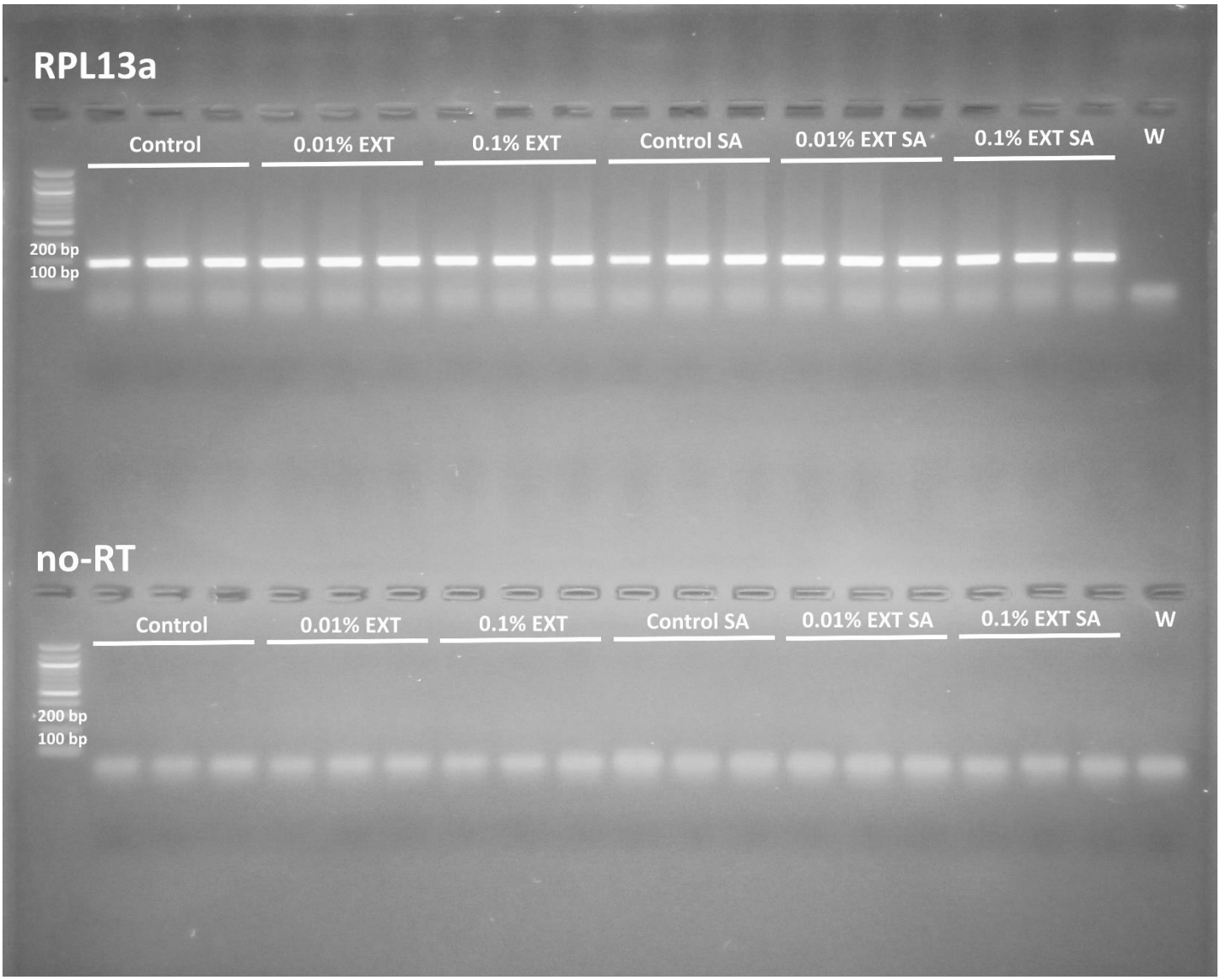


**Figure S1.** Positive and negative control for Reverse transcription quantitative PCR (RT-qPCR) analysis. The samples were checked using Reverse transcription PCR (RT PCR) method. Electrophoresis of RT PCR products was performed using a 2% TAE agarose gel stained with ethidium bromide. RPL13a - positive control of obtained samples; no-RT – negative control without using of reverse transcriptase during transcription of RNA to cDNA; Control – samples collected 24 hours after injection of physiological saline; 0.01% EXT – samples collected 24 hours after injection of physiological saline and *Solanum nigrum* fruit extract at concentration 0.01%; 0.1% EXT – samples collected 24 hours after injection of physiological saline and *Solanum nigrum* fruit extract at concentration 0.1%. Control SA – samples collected 24 hours after injection of physiological saline from additionally immunized beetles. 0.01% EXT SA– samples collected 24 hours after injection of physiological saline and *Solanum nigrum* fruit extract at concentration 0.01% from immunized beetles; 0.1% EXT SA– samples collected 24 hours after injection of physiological saline and *Solanum nigrum* fruit extract at concentration 0.1% from immunized beetles; W -water (no template control).