

Poster Presentation

[PS02] ポスター発表(学生 B:コアタイム1)

Sat. Mar 30, 2024 11:30 AM - 12:30 PM Sakura (Student) (Sakura)

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[PS02-11]Suppression of phenoloxidase activity by a serpin 27A-like protein from *Drino inconspicuides* (Diptera: Tachinidae)

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Various lepidopteran pests could be parasitized by *Drino inconspicuides* (Diptera: Tachinidae), such as *Mythimna separata* (Lepidoptera: Noctuidae). We found that once *D. inconspicuides* parasitizes *M. separata*, the tachinid larvae suppress the phenoloxidase (PO) activity of the host. A comprehensive gene expression analysis of *D. inconspicuides* larvae revealed that a serpin 27A-like protein was expressed in salivary glands, suggesting that the serpin plays a key role to suppress the PO activity. To verify the functionality of this protein, we expressed the protein of approximately 45 kDa size by *E. coli* and baculovirus expression systems. Compared to BSA proteins, the serpin suppressed significantly PO activity in hemolymph of *M. separata*. This results implies that the serpin 27A-like protein has a potential to be used as novel lepidopteran pest control agent.