

Developmental Arrest of *Spodoptera exigua* Due to A Polydnavirus

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This experiment was intended to find out whether a polydnavirus, *Cotesia plutellae* bracovirus (CpBV), can give any inhibitory effect on larval development of a non-host, *Spodoptera exgiua*. CpBV was extracted from calyx ovarian region of two or three-days old females of *C. plutellae*. The extracted CpBV was confirmed by immunoblotting with polyclonal antibody raised against CpBV. When one female equivalent CpBV was injected into hemocoel of each L4D3 (three days old fourth instar larvae) of *S. exgiua*, the infected larvae exhibited delayed larval period and significant reduction of pupation. However, co-injection of CpBV and its antibody did not show any inhibitory effect on the larval development. These results indicate that CpBV can give inhibitory effect on the non-natural host, *S. exgiua* and that it can be used for designing a new strategy to control *S. exgiua* in terms of the viral products. This latter possibility is being actively examined in this laboratory.