

JOINT EVENT

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Analysis of the *vip3* genes in local *Bacillus thuringiensis* kurstaki strains and their insecticidal activity

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A novel group of insecticidal proteins named vegetative insecticidal proteins (Vip) are produced by *Bacillus thuringiensis* (Bt) bacteria during its vegetative stage. In this study we characterised the *vip3* genes of two local Bt isolates (BnBt, MnD). Firstly, partial-purified *Vip3* proteins of some local Bt isolates were tested against the *Spodoptera littoralis* larvae. After obtaining good insecticidal activity with BnBt and MnD isolates, *Vip3* proteins of these bacteria were purified from supernatants of bacterial cultures by ion exchange chromatography. Purified proteins were subjected to SDS-PAGE analysis and 90 kDa band of proteins were determined. These purified proteins were tested against *S. littoralis* larvae. Results showed that *Vip3* proteins of BnBt and MnD produced 86.66% and 83.33% insecticidal activity on *S. littoralis* larvae, respectively. The lethal concentrations (LC_{50}) of BnBt and MnD were determined as 41.860 ng and 55.154 ng, respectively. These results suggest that *vip3* genes of our local isolates may be alternatives for preventing resistance in various insect-pest species. Also these proteins may be used at developing bio-pesticides.

Biography

Remziye Nalcacioglu has completed her PhD in 2003 from Karadeniz Technical University, in Turkey. She has been working in the same university as an academican. She is working on insect viruses including baculoviruses, iridoviruses and *Bacillus thuringiensis* bacteria.

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