results demonstrate that the response of CM to CpGV is not homogenous due to some genetic factors. However, the diversity of naturally occurring CpGV isolates is sufficient to control all known resistant CM populations.

Temporal transcriptional analysis of *Cydia pomonella* granulovirus in the midgut of codling moth by using microarray analysis

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The *Cydia pomonella* granulovirus (CpGV) is the most widespread commercially used baculovirus and a cornerstone in the control of codling moth, *C. pomonella* L., in both, organic and integrated pome fruit production. Recently, codling moth populations resistant to CpGV products have been located in Europe. However, only limited information on the infection process of CpGV is available. To gain a better understanding of the interaction between CpGV and its host, a microarray analysis of the transcription of CpGV genes in the midgut of codling moth was performed So far, on transcriptional level, there have been microarray analyses of infected cell lines with Group I and II Alphabaculoviruses only. First, an oligonucleotide based, 15k microarray covering the complete genome of CpGV was developed. Then, codling moth larvae were infected with CpGV and RNA samples were taken from midguts between 0 and 120 h post infection. The obtained microarray data were also compared to reverse transcription quantitative PCR. Microarray analysis of the different time points resulted in a detailed overview of the temporal chronology of the transcription of all 143 CpGV genes. Five representative gene clusters were identified by performing a k-means clustering. Thereby, it was also possible to group undescribed CpGV genes according to their transcriptional profile. First transcriptional signals were detected between 12 and 24 h followed by a transcription boost of CpGV genes at 48 h; highest transcription activity was detected at 96 h post infection. A delayed and limited transcriptional activity of CpGV was observed in midguts of codling moth strains resistant to CpGV.

Endophytic establishment of the entomopathogenic fungus *Beauveria bassiana* in grapevine *Vitis vinifera*

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Fungal entomopathogens are important antagonists of arthropod pests and have attracted increased attention as biocontrol agents in integrated pest management programs. In addition to colonizing arthropods, evidence has accumulated that some entomopathogenic fungi like *Beauveria bassiana* (Bals.) Vuill. (Ascomycota: