

Molecular characterization of different isolates of CpGV and their activity against *Cydia molesta*

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The codling moth granulovirus (*Cydia pomonella* granulovirus, CpGV) is an efficient biological agent of the codling moth which is of great importance in organic fruit growing. Currently there are CpGV preparations from different manufactures available in Europe and about 100-150.000 ha per year are used. Although CpGV has a very narrow host range, in addition to *C. pomonella* also *C. molesta* can be infected with lower efficiency. So far there is no effective control agent in organic farming for *C. molesta*, therefore, the direct control approach using CpGV is tested. Four different CpGV isolates were tested in bioassay against a laboratory strain of *C. molesta* and the LC_{50s} (median lethal concentration) of these isolates were determined. The rating was carried out after 7 and 14 days. In addition to the biological activity of iso-

lates against *C. molesta* the CpGV isolates were characterized by restriction analysis. The restriction profiles were compared to the known profiles of CpGV-M. A virus isolate (CpGV-V22, Andermatt Biocontrol), which has great potential as bioinsecticide, is a mixture of different genotypes. Therefore an *in vivo* cloning procedure was performed. Thereby, a pure genotype "V22P" could be isolated from this mixture of different genotypic variants. In view of using the cloned *in vivo* CpGV-V22P in pest control it is interesting to determine to what extent the individual genotype shows a higher infectivity for *C. molesta* than the corresponding CpGV-V22 isolate. The differences in biological activity between mixture and pure genotype are determined in a bioassay.