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Morphological, genetic and biological characterisation of a novel *Alphabaculovirus* isolated from *Cryptophlebia peltastica* (Lepidoptera: Tortricidae)

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Abstract

Cryptophlebia peltastica is an agricultural pest of litchis and macadamias in South Africa with phytosanitary status for certain markets. Current control methods rely on chemical, cultural and classical biological control. However, a microbial control option has not been developed. An *Alphabaculovirus* from *C. peltastica* was recovered from a laboratory reared colony and morphologically characterised by transmission electron microscopy (TEM). Analysis of occlusion bodies indicated a single NPV (SNPV) varying in size from 421 to 1263 nm. PCR amplification and sequencing of the *polh* gene region using universal primers followed by BLAST analysis revealed a 93 % similarity to a partial *polh* gene sequence from *Epinotia granitalis* NPV. Further genetic characterisation involving single restriction endonuclease (REN) digestion of genomic DNA was carried out to generate profiles for comparison against other baculovirus species and potential new isolates of the same virus.