

A Densovirus Zhenjiang Strain in China

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A densovirus was isolated from silkworm with flacherie disease in *Zhejiang*, China. The nucleocapsids are spherical in shape with 18–22 nm in diameter. The virus particles were found to contain a single-stranded linear DNA genome. The DNA extracted from the virus sample consists of two sets of molecules about 6.0kb and 6.6kb respectively, indicating that the virus particles have a split genome. An infectious particle of the virus may contain either strand of the virus genome, so that in a population of infectious particles half of the virions contain a plus strand and half contain a minus strand. The virus has four structural proteins (VP1, VP2, VP3 and VP4) with molecular weights about 24kD, 25kD, 56kD and 66kD respectively. A main structural protein gene consists of 1500 nucleotides and is predicted to code a protein of 499 amino acids. An identity of 98.1% in nucleotide sequence and 98.6% in the predicted amino acid sequence are shared with its homologue in *Bombyx mori* densovirus Yamashi isolate VD1-ORF2. A protein about 53KD expressed from the gene in *Escherichia coli* was identified to be a structural protein of the virus by Western blotting with viral antibody. Some silkworm varieties are resistant to the virus and heredity analysis showed that the resistance was controlled by a major recessive gene which was located in the 15th linkage group.