Iflaviridae

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Iflaviridae is a family of positive sense RNA viruses insect-infecting viruses. Some of the insects commonly infected by iflaviruses include aphids, leafhoppers, flies, bees, ants, silkworms and wasps. The name "Ifla" is derived from the name "**I**nfectious **fla**cherie virus", for the type species.[1] There is only one genus (***Iflavirus***) and 14 species in this family, including the type species *Infectious flacherie virus*.[2][1][3]

Iflaviridae	
Virus classification	
Group:	Group IV ((+)ssRNA)
Order:	*Picornavirales*
Family:	***Iflaviridae***
Genus:	***Iflavirus***
Type species	
Infectious flacherie virus	
Species	
See text.	

Contents

Taxonomy

The family *Iflaviridae* contains one genus, *Iflavirus*, with the following 14 species:[1]

- Antheraea pernyi iflavirus[4]
- *Brevicoryne brassicae virus*
- *Deformed wing virus*
- *Dinocampus coccinellae paralysis virus*
- *Ectropis obliqua virus*
- *Infectious flacherie virus*
- *Lygus lineolaris virus 1*
- *Lymantria dispar iflavirus 1*
- *Nilaparvata lugens honeydew virus 1*
- *Perina nuda virus*
- *Sacbrood virus*
- *Slow bee paralysis virus*
- *Spodoptera exigua iflavirus 1*[5]
- *Spodoptera exigua iflavirus 2*
- *Varroa destructor virus-1*

Structure

Members of this family are insect-infecting viruses that consist of positive single-strand RNA genomes translated into a single polyprotein of ~3000 amino acids long. It encodes helicase, protease and RNA-dependent RNA polymerase enzymes and four structural proteins (VP1–4). The non-enveloped capsid has an icosahedral T=pseudo3 symmetry and is around 30 nm in diameter. VP1, VP2 and VP3 form the outer portion, with VP4 located internally.[1][3] Genomes are linear and non-segmented, around 8.8-9.7kb in length.[1][3]

Genus	Structure	Symmetry	Capsid	Genomic arrangement	Genomic segmentation
Iflavirus	Icosahedral	Pseudo T=3	Non-enveloped	Linear	

Life cycle

Viral replication is cytoplasmic. Entry into the host cell is achieved by attachment to host receptors, which mediates endocytosis. Replication follows the positive stranded RNA virus replication model. Positive stranded RNA virus transcription is the method of transcription. Translation takes place by ribosomal skipping. Insects serve as the natural host.[1][3]

Genus	Host details	Tissue tropism	Entry details	Release details	Replication site	Assembly site	Transmission
Iflavirus	Insects	None	Unknown	Unknown	Cytoplasm	Cytoplasm	Unknown

Pathogenicity

Several viruses in this family are economically important because they are highly pathogenic to their honeybee and silkworm hosts, while others (including *Dinocampus coccinellae paralysis virus*, *Nasonia vitripennis virus* and *Venturia canescens picorna-like virus*) appear to cause little or no symptoms.[6]

References

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External links

- **ICTV Online (10th) Report: Iflaviridae**
- **Viralzone**: Iflavirus