



## Correction to: Developments in the classification and nomenclature of arthropod-infecting large DNA viruses that contain *pif* genes

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Legends for Fig. 1 and Fig. 2 were incorrectly published in the original version, in which these had been interchanged. This is corrected now (Figs. 1, 2).

Errors in Table 3 were corrected. Revised version updated here.

The original article has been corrected.

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The original article can be found online at <https://doi.org/10.1007/s00705-023-05793-8>.

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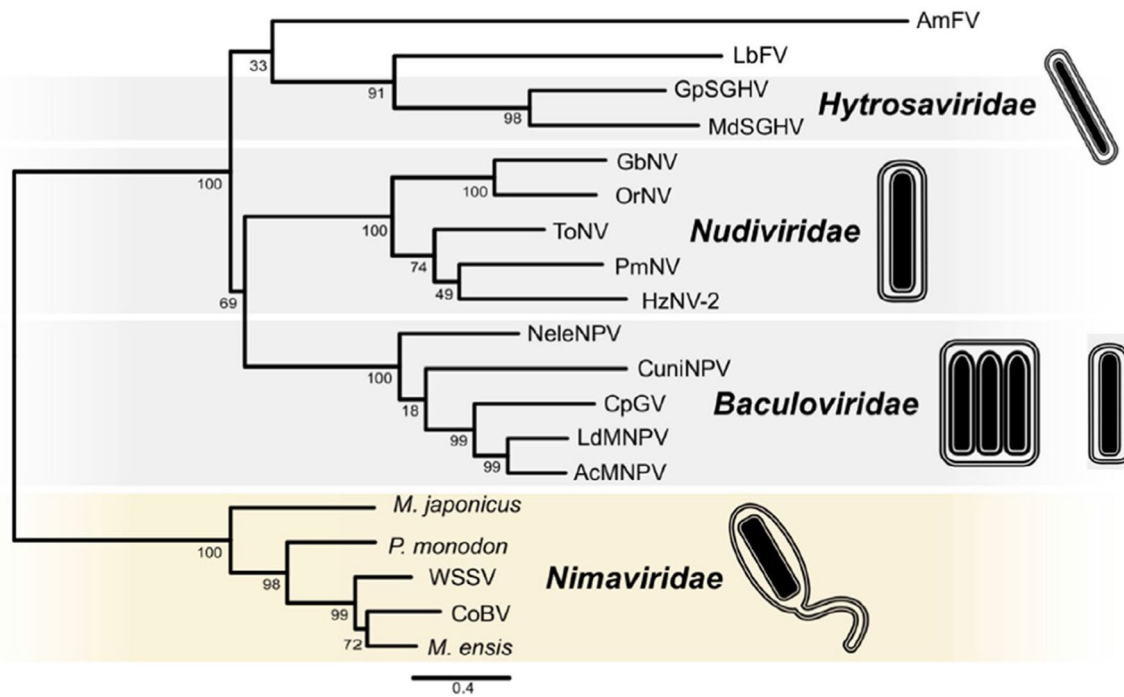
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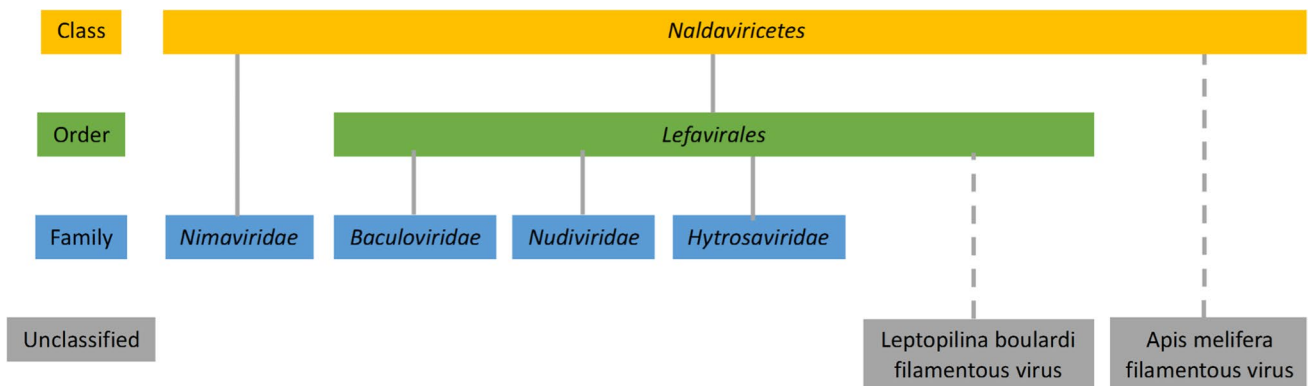
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**Fig. 1** Phylogenetic analysis of members of the class *Naldaviricetes*. Concatenated alignments of five PIF amino acid sequences (*pif-0/p74*, *pif-1*, *pif-2*, *pif-3*, and *pif-5/odv-e56*), DNA polymerase (*dnapol*), and sulfhydryl oxidase (*p33*) were used to infer relationships by maximum likelihood as implemented in RAXML version 8.2.9 with substitution models and parameters selected for each alignment. Family-level classification is indicated for different clades in the midpoint-rooted tree. Abbreviations of virus names are as follows: AcMNPV, Autographa californica multiple nucleopolyhedrovirus; LdMNPV, Lymantria dispar MNPV; CpGV, Cydia pomonella granulovirus; CuniNPV, Culex nigripalpus nucleopolyhedrovirus; NeleNPV, Neodiprion lecontei NPV; OrNV,

Oryctes rhinoceros nudivirus; GbNV, Gryllus bimaculatus NV; HzNV-2, Heliothis zea NV-2; PmNV, Peneaus monodon NV; ToNV, Tipula oleracea NV; GpSGHV, Glossina pallidipes salivary gland hypertrophy virus; MdSGHV, Musca domestica SGHV; AmFV, Apis mellifera filamentous virus; LbFV, Leptopilina boulardi FV; WSSV, white spot syndrome virus; CoBV, Chionoecetes opilio bacilliform virus. Endogenized nimaviruses from *Marsupenaeus japonicus*, *Peneaus monodon*, and *Metapeneaus ensis* were also included. This figure was reproduced and slightly modified from Kawato et al., 2019, J Virol 93:e01144-18, <https://doi.org/10.1128/JVI.01144-18>, with permission from the authors and the American Society for Microbiology.



**Fig. 2** Taxonomic hierarchy of families of nuclear arthropod large DNA viruses. A new class, *Naldaviricetes*, was established for classification of the viruses in the four currently established families *Baculoviridae*, *Nudiviridae*, *Hytrosaviridae*, and *Nimaviridae*. A new order, *Lefavirales*, was introduced to include three of these families.

The two viruses indicated at the bottom of the figure (*Apis mellifera* filamentous virus [3, 10] and *Leptopilina boulardi* filamentous virus [15]) are currently unclassified, but based on their genome content, they bear the hallmarks of members of the taxa *Naldaviricetes* and *Lefavirales*, respectively.

**Table 3** List of currently valid lefaviral binomial species names along with common virus names and their abbreviations. Please note that virus names will remain unaffected by recent nomenclatural changes

Family/genus	Binominal species name	Exemplar/common virus name	Abbreviation
<b>Family Baculoviridae</b>			
<i>Alphabaculovirus</i>	<i>Alphabaculovirus adhonmai</i>	Adoxophyes honmai nucleopolyhedrovirus	AdhoNPV
	<i>Alphabaculovirus agipsilonis</i>	Agrotis ipsilon multiple nucleopolyhedrovirus	AgipNPV
	<i>Alphabaculovirus agsegetum</i>	Agrotis segetum nucleopolyhedrovirus A	AgseNPV-A
	<i>Alphabaculovirus alteragsegetum</i>	Agrotis segetum nucleopolyhedrovirus B	AgseNPV-B
	<i>Alphabaculovirus anpernyi</i>	Antheraea pernyi nucleopolyhedrovirus	AnpeNPV
	<i>Alphabaculovirus angemmatalis</i>	Anticarsia gemmatalis multiple nucleopolyhedrovirus	AgMNPV
	<i>Alphabaculovirus ardigrammae</i>	Artaxa digamma nucleopolyhedrovirus	ArdiNPV
	<i>Alphabaculovirus auctalifornicae</i>	Autographa californica multiple nucleopolyhedrovirus	AcMNPV
	<i>Alphabaculovirus bomori</i>	Bombyx mori nucleopolyhedrovirus	BmNPV
	<i>Alphabaculovirus busuppressariae</i>	Buzura suppressaria nucleopolyhedrovirus	BuzuNPV
	<i>Alphabaculovirus capomonae</i>	Catopsilia pomona nucleopolyhedrovirus	CapoNPV
	<i>Alphabaculovirus chofumiferanae</i>	Choristoneura fumiferana multiple nucleopolyhedrovirus	CfMNPV
	<i>Alphabaculovirus alterchofumiferanae</i>	Choristoneura fumiferana DEF multiple nucleopolyhedrovirus	CfMNPV-DEF
	<i>Alphabaculovirus chomurinanae</i>	Choristoneura murinana nucleopolyhedrovirus	ChmuNPV
	<i>Alphabaculovirus chorosaceanae</i>	Choristoneura rosaceana nucleopolyhedrovirus	ChroNPV
	<i>Alphabaculovirus chrychalcites</i>	Chrysodeixis chalcites nucleopolyhedrovirus	ChchNPV
	<i>Alphabaculovirus chrincludentis</i>	Chrysodeixis includens nucleopolyhedrovirus	ChinNPV
	<i>Alphabaculovirus clabilineatae</i>	Clanis bilineata nucleopolyhedrovirus	ClbiNPV
	<i>Alphabaculovirus covestigialis</i>	Condylorrhiza vestigialis nucleopolyhedrovirus	CovoNPV
	<i>Alphabaculovirus crypeltasticae</i>	Cryptophlebia peltastica nucleopolyhedrovirus	CrpeNPV
	<i>Alphabaculovirus cycundantis</i>	Cyclophragma undans nucleopolyhedrovirus	CyunNPV
	<i>Alphabaculovirus dijunonis</i>	Dione junio nucleopolyhedrovirus	DijuNPV
	<i>Alphabaculovirus ecobliquae</i>	Ectropis obliqua nucleopolyhedrovirus	EcobNPV
	<i>Alphabaculovirus eppostvittanae</i>	Epiphyas postvittana nucleopolyhedrovirus	EppoNPV
	<i>Alphabaculovirus eupseudoconspersae</i>	Euproctis pseudoconspersa nucleopolyhedrovirus	EupsNPV
	<i>Alphabaculovirus helarmigerae</i>	Helicoverpa armigera nucleopolyhedrovirus	HearNPV
	<i>Alphabaculovirus heleucaae</i>	Hemileuca species nucleopolyhedrovirus	HespNPV
	<i>Alphabaculovirus hycuneeae</i>	Hyphantria cunea nucleopolyhedrovirus	HycuNPV
	<i>Alphabaculovirus hytalacae</i>	Hyposidra talaca nucleopolyhedrovirus	HytaNPV
	<i>Alphabaculovirus lafiscellariae</i>	Lambdina fiscellaria nucleopolyhedrovirus	LafiNPV
	<i>Alphabaculovirus leseparatae</i>	Leucania separata nucleopolyhedrovirus	LeseNPV
	<i>Alphabaculovirus lonobliquae</i>	Lonomia obliqua nucleopolyhedrovirus	LoobNPV
	<i>Alphabaculovirus lydisparis</i>	Lymantria dispar multiple nucleopolyhedrovirus	LdMNPV
	<i>Alphabaculovirus lyxylinae</i>	Lymantria xyliina nucleopolyhedrovirus	LyxyNPV
	<i>Alphabaculovirus mabrassicae</i>	Mamestra brassicae multiple nucleopolyhedrovirus	MbMNPV
	<i>Alphabaculovirus maconfiguratae</i>	Mamestra configurata nucleopolyhedrovirus A	MacoNPV-A
	<i>Alphabaculovirus altermaconfiguratae</i>	Mamestra configurata nucleopolyhedrovirus B	MacoNPV-B
	<i>Alphabaculovirus mavitratae</i>	Maruca vitrata nucleopolyhedrovirus	MaviNPV
	<i>Alphabaculovirus myunipunctae</i>	Mythimna unipuncta nucleopolyhedrovirus A	MyunNPV-A
	<i>Alphabaculovirus altermyunipunctae</i>	Mythimna unipuncta nucleopolyhedrovirus B	MyunNPV-B
	<i>Alphabaculovirus oprumatae</i>	Operophtera brumata nucleopolyhedrovirus	OpbrNPV
	<i>Alphabaculovirus orleucostigmae</i>	Orgyia leucostigma nucleopolyhedrovirus	OrleNPV
	<i>Alphabaculovirus orpseudotsugatae</i>	Orgyia pseudotsugata multiple nucleopolyhedrovirus	OPMNPV
	<i>Alphabaculovirus oxochraceae</i>	Oxyplax ochracea nucleopolyhedrovirus	OxocNPV
	<i>Alphabaculovirus pesauciae</i>	Peridroma saucia nucleopolyhedrovirus	PesaNPV
	<i>Alphabaculovirus peluscae</i>	Perigonia lusca nucleopolyhedrovirus	PeluNPV

**Table 3** (continued)

Family/genus	Binominal species name	Exemplar/common virus name	Abbreviation
	<i>Alphabaculovirus ranus</i>	Rachiplusia nu nucleopolyhedrovirus	RanuNPV
	<i>Alphabaculovirus speridaniae</i>	Spodoptera eridania nucleopolyhedrovirus 251	SperNPV-251
	<i>Alphabaculovirus altersperidaniae</i>	Spodoptera eridania nucleopolyhedrovirus -CNPSo-165	SperNPV-CNPSo-165
	<i>Alphabaculovirus spexemptae</i>	Spodoptera exempta nucleopolyhedrovirus	SpexNPV
	<i>Alphabaculovirus spexiguae</i>	Spodoptera exigua multiple nucleopolyhedrovirus A	SeMNPV-A
	<i>Alphabaculovirus alterspexiguae</i>	Spodoptera exigua multiple nucleopolyhedrovirus B	SeMNPV-B
	<i>Alphabaculovirus spofrugiperdae</i>	Spodoptera frugiperda multiple nucleopolyhedrovirus	SfMNPV
	<i>Alphabaculovirus splittoralis</i>	Spodoptera littoralis nucleopolyhedrovirus	SpliNPV
	<i>Alphabaculovirus spliturae</i>	Spodoptera litura nucleopolyhedrovirus	SpltNPV
	<i>Alphabaculovirus sujubae</i>	Sucra jujuba nucleopolyhedrovirus	SujuNPV
	<i>Alphabaculovirus thorchilaceae</i>	Thysanoplusia orichalcea nucleopolyhedrovirus	ThohNPV
	<i>Alphabaculovirus trini</i>	Trichoplusia ni single nucleopolyhedrovirus	TnSNPV
	<i>Alphabaculovirus urprotei</i>	Urbanus proteus nucleopolyhedrovirus	UrprNPV
	<i>Alphabaculovirus wisignatae</i>	Wiseana signata nucleopolyhedrovirus	WisiNPV
<i>Betabaculovirus</i>	<i>Betabaculovirus adoranae</i>	Adoxophyes orana granulovirus	AdorGV
	<i>Betabaculovirus agsegetum</i>	Agrotis segetum granulovirus	AgseGV
	<i>Betabaculovirus arrapae</i>	Artogeia rapae granulovirus	ArraGV
	<i>Betabaculovirus chofumiferanae</i>	Choristoneura fumiferana granulovirus	CfGV
	<i>Betabaculovirus clanachoretiae</i>	Clostera anachoreta granulovirus	ClanGV
	<i>Betabaculovirus clanastomosis</i>	Clostera anastomosis granulovirus A	ClasGV-A
	<i>Betabaculovirus alterclanastomosis</i>	Clostera anastomosis granulovirus B	ClasGV-B
	<i>Betabaculovirus cnamedinalis</i>	Cnaphalocrocis medinalis granulovirus	CnmeGV
	<i>Betabaculovirus cryleucotretae</i>	Cryptophlebia leucotreta granulovirus	CrleGV
	<i>Betabaculovirus cypomonellae</i>	Cydia pomonella granulovirus	CpGV
	<i>Betabaculovirus disaccharalis</i>	Diatraea saccharalis granulovirus	DisaGV
	<i>Betabaculovirus epaporematae</i>	Epinotia aporema granulovirus	EpapGV
	<i>Betabaculovirus erellonis</i>	Erinnyis ello granulovirus	ErelGV
	<i>Betabaculovirus habrillantiae</i>	Harrisina brillians granulovirus	HabrGV
	<i>Betabaculovirus helarmigeratae</i>	Helicoverpa armigera granulovirus	HearGV
	<i>Betabaculovirus hycunae</i>	Hyphantria cunea granulovirus	HycuNPV
	<i>Betabaculovirus lacoleraceae</i>	Lacanobia oleracea granulovirus	LaolGV
	<i>Betabaculovirus molatipedis</i>	Mocis latipes granulovirus	MolaGV
	<i>Betabaculovirus myunipunctatae</i>	Mythimna unipuncta granulovirus A	MyunGV-A
	<i>Betabaculovirus altermyunipunctatae</i>	Mythimna unipuncta granulovirus B	MyunGV-B
	<i>Betabaculovirus maphaseoli</i>	Matsumuraesia phaseoli granulovirus	MaphGV
	<i>Betabaculovirus phoperculellae</i>	Phthorimaea operculella granulovirus	PhopGV
	<i>Betabaculovirus plinterpunctellae</i>	Plodia interpunctella granulovirus	PlinGV
	<i>Betabaculovirus pluxylostellae</i>	Plutella xylostella granulovirus	PlxyGV
	<i>Betabaculovirus spofrugiperdae</i>	Spodoptera frugiperda granulovirus	SfGV
	<i>Betabaculovirus spliturae</i>	Spodoptera litura granulovirus	SpltGV
	<i>Betabaculovirus trini</i>	Trichoplusia ni granulovirus	TnGV
	<i>Betabaculovirus xecnigri</i>	Xestia c-nigrum granulovirus	XecnGV
<i>Gammabaculovirus</i>	<i>Gammabaculovirus nelecontei</i>	Neodiprion lecontei nucleopolyhedrovirus	NeleNPV
	<i>Gammabaculovirus nesertiferi</i>	Neodiprion sertifer nucleopolyhedrovirus	NeseNPV
<i>Deltabaculovirus</i>	<i>Deltabaculovirus cunigripalpi</i>	Culex nigripalpus nucleopolyhedrovirus	CuniNPV

**Table 3** (continued)

Family/genus	Binominal species name	Exemplar/common virus name	Abbreviation
<b>Family Nudiviridae</b>			
<i>Alphanudivirus</i>	<i>Alphanudivirus droinnubilae</i>	<i>Drosophila innubila</i> nudivirus	DiNV
	<i>Alphanudivirus dromelanogasteris</i>	<i>Kallithea</i> virus	KV
	<i>Alphanudivirus alterdromelanogasteris</i>	Tomelloso virus	TNV
	<i>Alphanudivirus tertidromelanogasteris</i>	Esparto virus	ENV
	<i>Alphanudivirus quartudromelanogasteris</i>	Mauternbach virus	MNV
	<i>Alphanudivirus grybimaculati</i>	<i>Gryllus bimaculatus</i> nudivirus	GbNV
	<i>Alphanudivirus oryrhinocerotis</i>	<i>Oryctes rhinoceros</i> nudivirus	OrNV
<i>Betanudivirus</i>	<i>Betanudivirus hezeae</i>	<i>Heliothis zea</i> nudivirus	HZNV
<i>Gammanudivirus</i>	<i>Gammanudivirus hogammari</i>	<i>Homarus gammarus</i> nudivirus	HgNV
	<i>Gammanudivirus pemonodonis</i>	<i>Penaeus monodon</i> nudivirus	PmNV
	<i>Gammanudivirus cracrangonis</i>	<i>Crangon crangon</i> nudivirus	CcNV
	<i>Gammanudivirus cameanadis</i>	<i>Carcinus meneas</i> nudivirus	CmPV
<i>Deltanudivirus</i>	<i>Deltanudivirus tipoleraceae</i>	<i>Tipula oleracea</i> nudivirus	ToGV
<b>Family Hytrosaviridae</b>			
<i>Glossinavirus</i>	<i>Glossinavirus glopallidipedis</i>	<i>Glossina pallipides</i> salivary gland hypertrophy virus	GpSGHV
<i>Muscavirus</i>	<i>Muscavirus musdomesticae</i>	<i>Musca domestica</i> salivary gland hypertrophy virus	MdSGHV

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