



Supplemental Figure 1. Orthologs search. The flowchart shows the methodology used to find new orthologous proteins in the family *Baculoviridae*. The boxes with continuous lines indicate the application of the multi Psi-Blast routine, whereas the boxes with dash-dot lines refer to the multi tBlastN/BlastP routines; both are steps contained in the *ad hoc* software. The double line boxes indicate decisions or actions that should be taken by the user. The rectangle with dash-dot line indicates the use of PSI-Coffee web server for making all the alignments; the dotted rectangle represents the HMMER software application for making hidden Markov models; and the dashed boxes refer to the use of the HaMStR software for remote orthology searching.

Table 1. Baculovirus complete genomes

	Name	Abbreviation	Accession number	Code
Alphabaculovirus (Group I)	<i>Antheraea pernyi</i> NPV-Z	AnpeNPV-Z	NC_008035	APN
	<i>Antheraea pernyi</i> NPV-L2	AnpeNPV-L2	EF207986	AP2
	<i>Anticarsia gemmatalis</i> MNPV-2D	AgMNPV-2D	NC_008520	AGN
	<i>Autographa californica</i> MNPV	AcMNPV	NC_001623	ACN
	<i>Bombyx mori</i> NPV	BmNPV	NC_001962	BMN
	<i>Bombyx mandarina</i> NPV	BomaNPV	NC_012672	BON
	<i>Choristoneura fumiferana</i> DEF MNPV	CfDEFMNPV	NC_005137	CDN
	<i>Choristoneura fumiferana</i> MNPV	CfMNPV	NC_004778	CFN
	<i>Epiphyas postvittana</i> NPV	EppoNPV	NC_003083	EPN
	<i>Hyphantria cunea</i> NPV	HycuNPV	NC_007767	HCN
	<i>Maruca vitrata</i> MNPV	MaviMNPV	NC_008725	MVN
	<i>Orgyia pseudotsugata</i> MNPV	OpMNPV	NC_001875	OPN
	<i>Plutella xylostella</i> MNPV	PlxyMNPV	NC_008349	PXN
	<i>Rachiplusia ou</i> MNPV	RoMNPV	NC_004323	RON
Alphabaculovirus (Group II)	<i>Adoxophyes honmai</i> NPV	AdhoNPV	NC_004690	AHN
	<i>Adoxophyes orana</i> NPV	AdorNPV	NC_011423	AON
	<i>Agrotis ipsilon</i> NPV	AgipNPV	NC_011345	AIN
	<i>Agrotis segetum</i> NPV	AgseNPV	NC_007921	ASN
	<i>Apocheima cinerarium</i> NPV	ApciNPV	FJ914221	APO
	<i>Chrysodeixis chalcites</i> NPV	ChChNPV	NC_007151	CCN
	<i>Clanis bilineata</i> NPV	CibiNPV	NC_008293	CBN
	<i>Ectropis obliqua</i> NPV	EcobNPV	NC_008586	EON
	<i>Euproctis pseudoconspersa</i> NPV	EupsNPV	NC_012639	EUN
	<i>Helicoverpa armigera</i> NPV-C1	HearNPV-C1	NC_003094	HA1
	<i>Helicoverpa armigera</i> NPV-G4	HearNPV-G4	NC_002654	HA4
	<i>Helicoverpa armigera</i> MNPV	HearMNPV	NC_011615	HAN
	<i>Helicoverpa armigera</i> SNPV-NNg1	HearSNPV-NNg1	NC_011354	HAS
	<i>Helicoverpa zea</i> SNPV	HzSNPV	NC_003349	HZN
	<i>Leucania separata</i> NPV-AH1	LeseNPV-AH1	NC_008348	LSN
	<i>Lymantria dispar</i> MNPV	LdMNPV	NC_001973	LDN
	<i>Lymantria xyliina</i> MNPV	LyxyMNPV	NC_013953	LXN
	<i>Mamestra configurata</i> NPV-A 90-2	MacoNPV-A 90-2	NC_003529	MCN
	<i>Mamestra configurata</i> NPV-A 90-4	MacoNPV-A 90-4	AF539999	MC4
	<i>Mamestra configurata</i> NPV-B	MacoNPV-B	NC_004117	MCB
	<i>Orgyia leucostigma</i> NPV	OrleNPV	NC_010276	OLN
<i>Spodoptera exigua</i> MNPV	SeMNPV	NC_002169	SEN	
<i>Spodoptera frugiperda</i> MNPV-3AP2	SfMNPV-3AP2	NC_009011	SF2	
<i>Spodoptera frugiperda</i> MNPV-19	SfMNPV-19	EU258200	SF9	
<i>Spodoptera litura</i> NPV-II	SpliNPV-II	NC_011616	SLN	
<i>Spodoptera litura</i> NPV-G2	SpliNPV-G2	NC_003102	SL2	
<i>Trichoplusia ni</i> SNPV	TnSNPV	NC_007383	TNN	
Betabaculovirus	<i>Adoxophyes orana</i> GV	AdorGV	NC_005038	AOG
	<i>Agrotis segetum</i> GV	AgseGV	NC_005839	ASG
	<i>Choristoneura occidentalis</i> GV	ChocGV	NC_008168	COG
	<i>Clostera anachoreta</i> GV	ClanGV	NC_015398	CAG
	<i>Cryptophlebia leucotreta</i> GV	CrleGV	NC_005068	CLG
	<i>Cydia pomonella</i> GV	CpGV	NC_002816	CPG
	<i>Helicoverpa armigera</i> GV	HearGV	NC_010240	HAG
	<i>Phthorimea operculella</i> GV	PhopGV	NC_004062	POG
	<i>Plutella xylostella</i> GV	PlxyGV	NC_002593	PXG
	<i>Pieris rapae</i> GV	PiraGV	NC_013797	PRG
	<i>Pseudaletia unipuncta</i> GV-Hawaii	PsunGV	NC_013772	PSG
	<i>Spodoptera litura</i> GV-K1	SpliGV	NC_009503	SLG
	<i>Xestia c-nigrum</i> GV	XnGV	NC_002331	XCG
	Gamma	<i>Neodiprion abietis</i> NPV	NeabNPV	NC_008252
<i>Neodiprion lecontei</i> NPV		NeleNPV	NC_005906	NLN
<i>Neodiprion sertifer</i> NPV		NeseNPV	NC_005905	NSN
Delta	<i>Culex nigripalpus</i> NPV	CuniNPV	NC_003084	CNN

This table contains all of the baculoviruses used in bioinformatic studies, sorted by genus (and within them by alphabetical order). MNPV is the abbreviation of multicapsid nucleopolyhedrovirus; NPV is the abbreviation of nucleopolyhedrovirus; SNPV is the abbreviation of single nucleopolyhedrovirus; GV is the abbreviation of granulovirus. The accession numbers are from National Center for Biotechnology Information (NCBI, <http://www.ncbi.nlm.nih.gov>) and correspond to the sequences of complete genomes. Code is a three letter abbreviation used in some pictures.