

Table S1. Genomic characteristics of species in the family *Iridoviridae* with their common name and abbreviation

Genus	Species	Virus common name	Genome length (bp)	GC%	ORFs	Accession	Abbreviation
<i>Lymphocystivirus</i>	<i>Lymphocystivirus micropogonias1</i>	Lymphocystis disease virus 4	211086	26.03	145	MN803438	LCDV-4
<i>Lymphocystivirus</i>	<i>Lymphocystivirus paralichthys1</i>	Lymphocystis disease virus 2	186250	27.23	144	AY380826	LCDV2
<i>Lymphocystivirus</i>	<i>Lymphocystivirus platichthys1</i>	Lymphocystis disease virus 1	102653	29.07	110	L63545	LCDV1
<i>Lymphocystivirus</i>	<i>Lymphocystivirus sparus1</i>	Lymphocystis disease virus 3	208501	33.01	152	KX643370	LCDV3
<i>Megalocytivirus</i>	<i>Megalocytivirus lates1</i>	Scale drop disease virus	124244	36.86	135	KR139659	SDDV
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Infectious spleen and kidney necrosis virus	111362	54.78	123	AF371960	ISKNV
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Giant sea perch iridovirus - K1	112565	53.02	121	KT804738	GSIV-K1
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Large yellow croaker iridovirus	111760	53.92	131	AY779031	LYCIV
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Orange spotted grouper iridovirus	112636	53.03	125	AY894343	OSGIV
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Pompano iridovirus	112321	53.4	124	MK098185	PIV
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Red sea bream iridovirus	112414	53.41	123	BD143114	RSIV
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Rock bream iridovirus	112080	53.0	127	AY532606	RBIV
<i>Megalocytivirus</i>	<i>Megalocytivirus pagrus1</i>	Turbot reddish body iridovirus	110104	54.99	120	GQ273492	TRBIV
<i>Ranavirus</i>	<i>Ranavirus alytes1</i>	Common midwife toad virus-NL	107772	55.27	94	KP056312	CMTV-NL
<i>Ranavirus</i>	<i>Ranavirus alytes1</i>	Andrias davidianus ranavirus	106734	55.02	97	KC865735	ADRV
<i>Ranavirus</i>	<i>Ranavirus alytes1</i>	Common midwife toad virus -E	106878	55.25	90	JQ231222	CMTV-E
<i>Ranavirus</i>	<i>Ranavirus alytes1</i>	Pelophylax esculentus virus	107469	55.18	93	MF538627	PEV
<i>Ranavirus</i>	<i>Ranavirus alytes1</i>	Pike-perch iridovirus	108041	55.29	91	KX574341	PPIV
<i>Ranavirus</i>	<i>Ranavirus alytes1</i>	Rana esculenta virus	107444	55.2	92	MF538628	REV
<i>Ranavirus</i>	<i>Ranavirus alytes1</i>	Testudo hermanni ranavirus	105811	55.37	93	KP266741	THRV
<i>Ranavirus</i>	<i>Ranavirus ambystoma1</i>	Ambystoma tigrinum virus	106332	54.02	92	AY150217	ATV
<i>Ranavirus</i>	<i>Ranavirus epinephelus1</i>	Singapore grouper iridovirus	140131	48.64	141	AY521625	SGIV
<i>Ranavirus</i>	<i>Ranavirus epinephelus1</i>	Grouper iridovirus	139793	48.61	139	AY666015	GIV
<i>Ranavirus</i>	<i>Ranavirus gadus1</i>	Lumpfish ranavirus	116726	54.63	100	MH665358	LfRV
<i>Ranavirus</i>	<i>Ranavirus perca1</i>	Epizootic haematopoietic necrosis virus	127011	54.05	108	FJ433873	EHNV
<i>Ranavirus</i>	<i>Ranavirus perca1</i>	European catfish virus	127549	54.26	103	KT989885	ECV
<i>Ranavirus</i>	<i>Ranavirus perca1</i>	European sheatfish virus	127732	54.23	103	JQ724856	ESV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Frog virus 3	105903	55.05	97	AY548484	FV3
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Bohle iridovirus	103531	55.16	91	KX185156	BIV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Cod iridovirus	114865	54.92	100	KX574342	CoIV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Frog virus 3	105070	55.01	92	KJ175144	SSME
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	German gecko ranavirus	103681	55.06	90	KP266742	GGRV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Rana grylio virus	105791	55.07	94	JQ654586	RGV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Ranavirus maximus	115510	54.94	102	KX574343	Rmax

<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Short-finned eel virus	126965	54.71	109	KX353311	SERV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Soft-shelled turtle iridovirus	105890	55.06	95	EU627010	SSTV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Tiger frog virus	105057	55.01	92	AF389451	TFV
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Tortoise ranavirus 1	103876	55.22	92	KP266743	ToRV1
<i>Ranavirus</i>	<i>Ranavirus rana1</i>	Zoo ranavirus	103266	55.05	91	MK227779	ZRV
<i>Chloriridovirus</i>	<i>Chloriridovirus aedes1</i>	Invertebrate iridescent virus 3	191100	47.89	150	DQ643392	IIV3
<i>Chloriridovirus</i>	<i>Chloriridovirus anopheles1</i>	Anopheles minimus iridovirus	163023	39.00	158	KF938901	AMIV
<i>Chloriridovirus</i>	<i>Chloriridovirus simulium1</i>	Invertebrate iridescent virus 22	197693	28.05	178	HF920633	IIV22
<i>Chloriridovirus</i>	<i>Chloriridovirus simulium1</i>	Invertebrate iridescent virus 30	198533	28.11	185	HF920636	IIV30 ¹
<i>Chloriridovirus</i>	<i>Chloriridovirus simulium1</i>	Invertebrate iridescent virus 22a	196456	28.01	183	HF920634	IIV22a
<i>Chloriridovirus</i>	<i>Chloriridovirus simulium2</i>	Invertebrate iridescent virus 25	204815	30.32	191	HF920635	IIV25
<i>Chloriridovirus</i>	<i>Chloriridovirus wiseana1</i>	Invertebrate iridescent virus 9	205791	30.91	191	GQ918152	IIV9
<i>Daphniairidovirus</i>	<i>Daphniairidovirus daphnia1</i>	Daphnia iridescent virus 1	288858	38.75	281	LS484712	DIV1
<i>Decapodiridovirus</i>	<i>Decapodiridovirus litopenaeus1</i>	Shrimp hemocyte iridescent virus	165809	34.58	175	MF599468	SHIV
<i>Decapodiridovirus</i>	<i>Decapodiridovirus litopenaeus1</i>	Cherax quadricarnatus iridovirus	165695	34.58	172	MF197913	CQIV
<i>Iridovirus</i>	<i>Iridovirus armadillidium1</i>	Invertebrate iridescent virus 31	220222	35.09	221	HF920637	IIV31
<i>Iridovirus</i>	<i>Iridovirus chilo1</i>	Invertebrate iridescent virus 6	212482	28.63	204	AF303741	IIV6

¹The IIV30 sequence reported by Piégu et al. [18] was labeled IIV30B in the present study to differentiate it from the IIV30C isolate from CSIRO.

