

Table S1. Genome sequences and size characteristics of representatives of nidovirus species used in bioinformatics analyses.

(Sub)family	Species	Acronym	Accession number	Genome, nt	Genome region, nt		
					ORF1a	ORF1b	3'ORFs
Arteriviridae	<i>Equine arteritis virus</i>	EAV	X53459.3	12704	5181	4347	2894
Arteriviridae	<i>Lactate dehydrogenase-elevating virus</i>	LDV	U15146.1	14104	6615	4236	3018
Arteriviridae	<i>Porcine respiratory and reproductive syndrome virus 1</i>	PRRSV-1	M96262.2	15111	7185	4380	3199
Arteriviridae	<i>Porcine respiratory and reproductive syndrome virus 2</i>	PRRSV-2	U87392.3	15411	7506	4377	3189
Arteriviridae	<i>Simian hemorrhagic fever virus</i>	SHFV	AF180391.2	15717	6312	4476	4634
Arteriviridae	<i>Kibale red-tailed guenon virus 1</i>	KRTGV	JX473849.1	15264	6177	4476	4379
Arteriviridae	<i>Kibale red colobus virus 1</i>	KRCV-1	KC787630.1	15446	6141	4395	4678
Arteriviridae	<i>Kibale red colobus virus 2</i>	KRCV-2	KC787658.1	15596	6153	4458	4530
Arteriviridae	<i>Mikumi yellow baboon virus 1</i>	MYBV-1	KM110938.1	14927	6165	4461	4101
Arteriviridae	<i>Simian hemorrhagic encephalitis virus</i>	SHEV	KM677927.1	15370	6270	4401	4385
Arteriviridae	<i>DeBrazza's monkey arterivirus</i>	DeMAV	KP126831.1	15684	6249	4503	4622
Arteriviridae	<i>Pebjah virus</i>	PBJV	KR139839.1	15478	6183	4452	4615
Arteriviridae	<i>African pouched rat arterivirus</i>	APRAV	KP026921.1	14953	6717	4353	3400
Arteriviridae	<i>Wobbly possum disease virus</i>	WPDV	JN116253.3	12917	5973	4236	2351
Coronavirinae	<i>Alphacoronavirus 1</i>	TGEV	AJ271965.2	28586	12024	8031	7939
Coronavirinae	<i>Human coronavirus 229E</i>	HCoV_229E	AF304460.1	27317	12228	8049	6287
Coronavirinae	<i>Human coronavirus NL63</i>	HCoV_NL63	AY567487.1	27553	12153	8037	6791
Coronavirinae	<i>Miniopterus bat coronavirus 1</i>	Mi-BatCoV_1A	EU420138.1	28326	12777	8022	6970
Coronavirinae	<i>Miniopterus bat coronavirus HKU8</i>	Mi-BatCoV_HKU8	EU420139.1	28773	12666	8025	7575
Coronavirinae	<i>Porcine epidemic diarrhea virus</i>	PEDV	AF353511.1	28033	12324	8022	7169
Coronavirinae	<i>Rhinolophus bat coronavirus HKU2</i>	Rh-BatCoV_HKU2	EF203065.1	27164	12150	8034	6428
Coronavirinae	<i>Scotophilus bat coronavirus 512</i>	Sc-BatCoV_512	DQ648858.1	28203	12357	8025	7286
Coronavirinae	<i>Bat coronavirus HKU10</i>	BtCoV_HKU10	JQ989271.1	28489	12318	8028	7596
Coronavirinae	<i>Bat coronavirus CDPHE15</i>	BtCoV_CDPHE15	KF430219.1	28035	12453	8025	7109
Coronavirinae	<i>Mink coronavirus 1</i>	MCoV	HM245925.1	28941	12027	8022	8327
Coronavirinae	<i>Betacoronavirus 1</i>	HCoV_OC43	AY585228.1	30741	13131	8157	8929
Coronavirinae	<i>Human coronavirus HKU1</i>	HCoV_HKU1	AY597011.1	29942	13395	8154	7892
Coronavirinae	<i>Murine coronavirus</i>	MHV	AF201929.1	31276	13230	8145	9378
Coronavirinae	<i>Pipistrellus bat coronavirus HKU5</i>	Pi-BatCoV_HKU5	EF065509.1	30482	13425	8124	8353

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<i>Coronavirinae</i>	<i>Rousettus bat coronavirus HKU9</i>	Ro-BatCoV_HKU9	EF065513.1	29114	12687	8070	7862
<i>Coronavirinae</i>	<i>Severe acute respiratory syndrome-related coronavirus</i>	SARS-CoV	AY274119.3 ¹	29751	13134	8088	7903
<i>Coronavirinae</i>	<i>Tylonycteris bat coronavirus HKU4</i>	Ty-BatCoV_HKU4	EF065505.1	30286	13284	8076	8343
<i>Coronavirinae</i>	<i>Middle East respiratory syndrome-related coronavirus</i>	MERS-CoV	JX869059.2	30119	13155	8082	8293
<i>Coronavirinae</i>	<i>Hedgehog coronavirus 1</i>	EriCoV	KC545383.1	30148	13344	8109	8134
<i>Coronavirinae</i>	<i>Avian coronavirus</i>	IBV	M95169.1	27608	11826	8064	6685
<i>Coronavirinae</i>	<i>Beluga whale coronavirus SW1</i>	BWCoV	EU111742.1	31686	11865	8127	10771
<i>Coronavirinae</i>	<i>Bulbul coronavirus HKU11</i>	BuCoV_HKU11	FJ376619.2	26487	10746	8049	6867
<i>Coronavirinae</i>	<i>Thrush coronavirus HKU12</i>	ThCoV_HKU12	FJ376621.1	26396	10812	8049	6722
<i>Coronavirinae</i>	<i>Munia coronavirus HKU13</i>	MuCoV_HKU13	FJ376622.1	26552	10998	7926	6812
<i>Coronavirinae</i>	<i>Coronavirus HKU15</i>	PoCoV_HKU15	JQ065043.1	25432	10875	7929	5866
<i>Coronavirinae</i>	<i>White-eye coronavirus HKU16</i>	WECov_HKU16	JQ065044.1	26041	10839	8049	6420
<i>Coronavirinae</i>	<i>Night heron coronavirus HKU19</i>	NHCoV_HKU19	JQ065047.1	26077	10830	8013	6553
<i>Coronavirinae</i>	<i>Wigeon coronavirus HKU20</i>	WiCoV_HKU20	JQ065048.1	26227	10704	7917	7114
<i>Coronavirinae</i>	<i>Common moorhen coronavirus HKU21</i>	CMCoV_HKU21	JQ065049.1	26223	10584	8043	6813
<i>Torovirinae</i>	<i>Bovine torovirus</i>	BRV	AY427798.1	28475	13332	6870	7219
<i>Torovirinae</i>	<i>Porcine torovirus</i>	PToV	JQ860350.1	28301	13248	6870	7199
<i>Torovirinae</i>	<i>White bream virus</i>	WBV	DQ898157.1	26660	13599	6969	4877
<i>Torovirinae</i>	<i>Fathead minnow nidovirus 1</i>	FHMNV	GU002364.2	27318	14565	6960	4813
<i>Torovirinae</i>	<i>Ball python nidovirus 1</i>	BPNV	KJ541759.1	33452	17394	6933	7170
<i>Mesoniviridae</i>	<i>Alphamesonivirus 1</i>	NDiV	DQ458789.2	20192	7491	7788	3466
<i>Mesoniviridae</i>	<i>Alphamesonivirus 2</i>	KSaV	KC807171.1	20795	8073	7788	3519
<i>Mesoniviridae</i>	<i>Alphamesonivirus 3</i>	DKNV	AB753015.2	20307	7644	7782	3493
<i>Mesoniviridae</i>	<i>Alphamesonivirus 4</i>	CASV	KJ125489.1	19917	7416	7782	3448
<i>Mesoniviridae</i>	<i>Alphamesonivirus 5</i>	HanaV	JQ957872.1	20070	7488	7776	3447
<i>Mesoniviridae</i>	<i>Mesonivirus 1</i>	NseV	JQ957874.1	20074	7482	7791	3488
<i>Mesoniviridae</i>	<i>Mesonivirus 2</i>	MenoV	JQ957873.1	19979	7404	7791	3463
<i>Roniviridae</i>	<i>Gill-associated virus</i>	GAV	AF227196.2	26253	12153	7869	5508

¹To generate Fig. S12 and S13, GU553365.1 was used; to generate Fig. S14 – AY394850.2