

Summary of mitoviruses from Table S1:*		Taxonomic classification of host fungus:†							Fungi with complete and annotated mitochondrial genome sequences:‡			
Grouping by related host genera	%Trp=UGA	Phylum	Subphylum	Class	Subclass	Order	Suborder	Family	Species name‡	Acc. no.	%Trp=UGA§	tRNA-Trp
<i>Cryphonectria</i> mitoviruses	53–64	Ascomycota	Peizizomycotina	Sordariomycetes	Sordariomycetidae	Diaporthales	none	Cryphonectriaceae	<i>Chrysosporthe austroafricana</i>	NC_030522	97	UCA
									<i>Chrysosporthe cubensis</i>	NC_030524	95	UCA
									<i>Chrysosporthe deuterocubensis</i>	NC_030523	95	UCA
									<i>Cryphonectria parasitica</i>	KT428651	95	UCA
<i>Ophiostoma</i> mitoviruses	43–100	Ascomycota	Peizizomycotina	Sordariomycetes	Sordariomycetidae	Ophiostomatales	none	Ophiostomataceae	<i>Sporothrix schenckii</i>	NC_015923	93	UCA
<i>Buergenerula</i> mitovirus	73	Ascomycota	Peizizomycotina	Sordariomycetes	Sordariomycetidae	Magnaporthales	none	Magnaporthaceae	na	na	na	na
<i>Fusarium</i> mitoviruses	67–94	Ascomycota	Peizizomycotina	Sordariomycetes	Hypocreomycetidae	Hypocreales	none	Nectriaceae	<i>Fusarium circinatum</i>	NC_022681	97	UCA
									<i>Fusarium graminearum</i>	NC_009493	98	UCA
									<i>Gibberella moniliformis</i>	NC_016687	97	UCA
									<i>Ilyonectria destructans</i>	NC_030340	97	UCA
									<i>Nectria cinnabarina</i>	NC_030252	95	UCA
<i>Thielaviopsis</i> mitoviruses	83	Ascomycota	Peizizomycotina	Sordariomycetes	Hypocreomycetidae	Microascales	none	Ceratocystidaceae	<i>Ceratocystis cacaofunesta</i>	NC_020430	95	UCA,UCA
<i>Botrytis</i> & <i>Sclerotinia</i> mitoviruses	31–100	Ascomycota	Peizizomycotina	Leotiomycetes	none	Helotiales	none	Sclerotiniaceae	<i>Botrytis cinerea</i>	KC832409	95	UCA,UCA
									<i>Sclerotinia borealis</i>	NC_025200	80	CCA,UCA
									<i>Sclerotinia sclerotiorum</i>	KT283062	81	UCA,UCA,UCA
<i>Gremmeniella</i> & <i>Hymenoscyphus</i> mitoviruses	50–94	Ascomycota	Peizizomycotina	Leotiomycetes	none	Helotiales	none	Helotiaceae	<i>Cairneyella variabilis</i>	NC_029759	100	UCA
									<i>Glaera lozoyensis</i>	NC_031375	89	UCA
<i>Tuber</i> mitoviruses	56–71	Ascomycota	Peizizomycotina	Peizizomycetes	none	Pezizales	none	Tuberaceae	<i>Pyronema omphalodes</i>	NC_029745	83	UCA
<i>Alternaria</i> mitoviruses	90–91	Ascomycota	Peizizomycotina	Dothideomycetes	Pleosporomycetidae	Pleosporales	Pleosporinae	Pleosporaceae	<i>Didymella pinodes</i>	NC_029396	97	UCA
									<i>Phaeosphaeria nodorum</i>	NC_009746	97	UCA
<i>Macrophoma</i> mitoviruses	0–36	Ascomycota	Peizizomycotina	Dothideomycetes	incertae sedis	Botryosphaeriales	none	Botryosphaeriaceae	na	na	na	na
<i>Helicobasidium</i> mitovirus	85	Basidiomycota	Pucciniomycotina	Pucciniomycetes	none	Helicobasidiales	none	Helicobasidiaceae	na	na	na	na
<i>Cronartium</i> mitoviruses	57–80	Basidiomycota	Pucciniomycotina	Pucciniomycetes	none	Pucciniales	none	Cronartiaceae	<i>Phakopsora meibomiaae</i>	NC_014352	69	UCA
									<i>Phakopsora pachyrhizi</i>	NC_014344	72	UCA
<i>Heterobasidium</i> mitovirus	43	Basidiomycota	Agaricomycotina	Agaricomycetes	incertae sedis	Russulales	none	Bondarzewiaceae	<i>Heterobasidium irregulare</i>	NC_024555	79	CCA,UCA
<i>Rhizoctonia</i> mitoviruses	0–21	Basidiomycota	Agaricomycotina	Agaricomycetes	incertae sedis	Cantharellales	none	Ceratobasidiaceae	<i>Rhizoctonia solani</i>	NC_021436	2	CCA
<i>Agaricus</i> mitovirus	21	Basidiomycota	Agaricomycotina	Agaricomycetes	Agaricomycetidae	Agaricales	none	Agaricaceae	<i>Agaricus bisporus</i>	JX271275	0	CCA
<i>Clitocybe</i> mitovirus	4	Basidiomycota	Agaricomycotina	Agaricomycetes	Agaricomycetidae	Agaricales	none	Tricholomataceae	<i>Tricholoma matsutake</i>	NC_028135	2	CCA
<i>Rhizophagus</i> mitoviruses	0	Mucoromycota	Glomeromycotina	Glomeromycetes	none	Glomerales	none	Glomeraceae	<i>Glomus cerebriforme</i>	NC_022144	1	CCA
									<i>Glomus</i> sp. DAOM 229456	JX065416	1	CCA
									<i>Rhizophagus fasciculatus</i>	NC_029185	1	CCA
									<i>Rhizophagus intradices</i>	NC_012056	4	CCA
									<i>Rhizophagus irregularis</i>	NC_014489	3	CCA
none yet reported	na	Mucoromycota	Glomeromycotina	Glomeromycetes	none	Diversisporales	none	Gigasporaceae	<i>Gigaspora margarita</i>	NC_016684	2	CCA
									<i>Gigaspora rosa</i>	NC_016985	0	CCA
none yet reported	na	Mucoromycota	Mortierellomycotina	none	none	Mortierellales	none	Mortierellaceae	<i>Mortierella verticillata</i>	NC_006838	3	CCA
none yet reported	na	Mucoromycota	Mucoromycotina	none	none	Mucorales	none	Cunninghamiaceae	<i>Absidia glauca</i>	KU196782	0	CCA
none yet reported	na	Mucoromycota	Mucoromycotina	none	none	Mucorales	none	Lichtheimiaceae	<i>Lichtheimia hongkongensis</i>	NC_024200	0	CCA
none yet reported	na	Mucoromycota	Mucoromycotina	none	none	Mucorales	Mucorineae	Mucoraceae	<i>Parasitella parasitica</i>	NC_024944	0	CCA
									<i>Mucor circinelloides</i>	KR809877	0	CCA
none yet reported	na	Mucoromycota	Mucoromycotina	none	none	Mucorales	Mucorineae	Rhizopodaceae	<i>Rhizopus arryzae</i>	NC_006836	0	CCA
none yet reported	na	Mucoromycota	Mucoromycotina	none	none	Mucorales	none	Phycomycetaceae	<i>Phycomyces blakesleeianus</i>	NC_027730	0	CCA
none yet reported	na	Zoopagomycota	Kickellomycotina	none	none	Harpellales	none	Legeriomycetaceae	<i>Zancudomyces culisetiae</i>	NC_006837	0	CCA
none yet reported	na	Blastocladiomycota	none	Blastocladiomycetes	none	Blastocladales	none	Blastocladiaceae	<i>Allomyces macrogynus</i>	NC_001715	0	CCA
									<i>Blastocladiella emersonii</i>	NC_011360	0	CCA
none yet reported	na	Chytridiomycota	none	Chytridiomycetes	none	Rhizophydiales	none	Rhizophydiaceae	<i>Rhizophyidium</i> sp. 136	NC_003053	0¶	CCA
none yet reported	na	Chytridiomycota	none	Chytridiomycetes	none	Spizellomycetales	none	Spizellomycetaceae	<i>Spizellomyces punctatus</i>	NC_003052	0¶	CCA
none yet reported	na	Chytridiomycota	none	Monoblepharidomycetes	none	Monoblepharidales	none	Harpochytriaceae	<i>Harpochytrium</i> sp. JEL105	NC_004623	0	CCA
									<i>Harpochytrium</i> sp. JEL94	NC_004760	0	CCA
none yet reported	na	Chytridiomycota	none	Monoblepharidomycetes	none	Monoblepharidales	none	Monoblepharidaceae	<i>Monoblepharella</i> sp. JEL15	NC_004624	0	CCA
none yet reported	na	Chytridiomycota	none	Monoblepharidomycetes	none	Monoblepharidales	none	incertae sedis	<i>Hyaloraphidium curvatum</i>	NC_003048	0	CCA

* Summarized from Table S1. Color-coding of mitoviruses and fungal hosts as in Table S1. na, not available, in this and other columns.

† The higher taxon (genus, suborder, or order) from which the complete mitochondrial sequences are derived is bolded and underlined. For each of these taxa, all complete mitochondrial sequences currently in GenBank NR/NT were used except in the case of families Nectriaceae and Glomeraceae, for which a representative subset of five of the available sequences was used.

‡ Species with complete mitochondrial genome sequences available and annotated for coding sequences in the indicated accessions in NR/NT at GenBank. Species of more basal fungi (other mucoromycetes, zoopagomycetes, blastocladiomycetes, and chytridiomycetes) for which complete and annotated mitochondrial genome sequences are available in NR/NT at GenBank, but which have not yet been shown to host mitoviruses, are listed at bottom.

§ In concatenated mitochondrial core protein ORFs, not including stop codons. Low %Trp=UGA values represented in Fig. 2 are shaded.

¶ The anticodon of the mitochondrially encoded tRNA-Trp is listed, as annotated in GenBank and also confirmed by ARAGORN. A few species have 2 or 3 mitochondrially encoded tRNA-Trp genes as noted.

¶¶ These mitochondrial core protein sequences include UGA stop codons.