



This form should be used for all taxonomic proposals. Please complete all those modules that are applicable (and then delete the unwanted sections). For guidance, see the notes written in blue and the separate document "Help with completing a taxonomic proposal"

Please try to keep related proposals within a single document; you can copy the modules to create more than one genus within a new family, for example.

MODULE 1: **TITLE, AUTHORS, etc**

<b>Code assigned:</b>	<b>2011.001aG</b>	(to be completed by ICTV officers)
Short title: <b>Change existing virus species names to non-Latinized binomials</b>		
(e.g. 6 new species in the genus <i>Zetavirus</i> )		
<b>Modules attached</b> (modules 1 and 9 are required)	1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input checked="" type="checkbox"/>	

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**List the ICTV study group(s) that have seen this proposal:**

A list of study groups and contacts is provided at <http://www.ictvonline.org/subcommittees.asp> . If in doubt, contact the appropriate subcommittee chair (fungal, invertebrate, plant, prokaryote or vertebrate viruses)

**ICTV-EC or Study Group comments and response of the proposer:**

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Date first submitted to ICTV:

5<sup>th</sup> August 2010

Date of this revision (if different to above):

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## MODULE 8: **NON-STANDARD**

Template for any proposal not covered by modules 2-7. This includes proposals to change the name of existing taxa (but note that stability of nomenclature is encouraged wherever possible).

non-standard proposal

Code	<b>2011.001aG</b>	(assigned by ICTV officers)
<b>Title of proposal: Change existing virus species names to non-Latinized binomials</b>		

### **Text of proposal:**

#### Proposal

A proposal to replace virus species names by non-Latinized binomial names consisting of the current italicized species name with the terminal word “virus” replaced by the italicized and non-capitalized genus name to which the species belongs. For instance, the current italicized species name *Measles virus* would become *Measles morbillivirus* while the current virus name measles virus and its abbreviation MeV would remain unchanged.

#### Arguments for the proposed change

1. The current species names approved by the ICTV are written in italics and capitalized but are otherwise the same as the English vernacular names of viruses written in Roman. This has resulted in considerable confusion among virologists who must differentiate in their writing, only on the basis of typography, between a species (a taxonomic construct created by taxonomists) and a virus (a molecular genetic parasite usually causing a disease) [1-4].
2. It is important not to confuse a virus species (which is a taxonomic construct or concept which does not have a sequence and cannot be isolated, transmitted to a host or otherwise manipulated) with a virus (a physical entity) that can be isolated and manipulated experimentally and always exists in the form of many mutants, variants and strains possessing different genome sequences. For the same reason, other taxonomic constructs such as a family or a genus also cannot be transmitted to a host or be sequenced. It is incorrect to write, as is often done, that the species *Measles virus* (italics) or *Cucumber mosaic virus* (italics) has been isolated, transmitted to a host or sequenced.
3. In biology, many animals, plants and microorganisms do not have vernacular names in English or other languages. As a result scientists will write that *Escherichia coli* (the italicized species name) has been infected by a bacterial virus, falsely implying that a taxonomic entity could be infected. In virology this undesirable practice can be avoided since all viruses have vernacular

names and these names (in Roman) can therefore be used if one wants to refer to the infectious agent rather than to the species into which it has been placed. Unfortunately at present many virologists do not use available correct typography and write that a virus species (italicized typography) can be transmitted or sequenced [5].

4. Binomial Latin names have been proposed for virus species [6, 7] although virologists have traditionally been opposed to the introduction of Latin names [8-10]. This would require the creation of new Latin names for more than 2000 virus species and reaching agreement on such names is unlikely to be easy [11]. In contrast, introducing non-Latinized binomial species names would be simple since they are obtained by combining existing English virus names with accepted genus names without involving the creation of new names.
5. Very few virus species are not yet assigned to a genus and are therefore excluded from the proposed system [12]. Only in a small number of cases will it be necessary to change existing genus names, mostly because these names do not follow the ICTV rule that genus names must end in “virus” [13, 14, 15]. For instance the species *Enterobacteria phage T1* is currently placed in a genus called “T1-like viruses” in the family *Siphoviridae* and a proper genus name would have to be introduced to make the binomial system applicable. However, the need to create proper genus names in such cases is already recognized by the ICTV. In the case of bacterial viruses, the word “phage” could be deleted from the species name altogether. For instance the virus enterobacteria phage M13 which is a member of the genus *Inovirus* could be placed into a species with the name *Enterobacteria M13 inovirus*.

Since the species name, which is written in italics with a capital initial, would be obtained by replacing the terminal word “virus” in the virus name with the genus name to which the species belongs, it would be appropriate to have species names such as *Human papilloma 32 alphapapillomavirus* and *Influenza A alphainfluenzavirus*. If the species name contains “-virus” as a suffix as in *Rotavirus A*, the suffix can be removed to avoid repeating “virus” twice in the binomial species name which then becomes *Rota A rotavirus*. Such word repetition is also frequent in the species names of organisms, for instance *Rattus rattus* (roof rat), *Ciconia ciconia* (white stork) and *Gorilla gorilla gorilla* (Western Lowland Gorilla).

The current proposal does not aim to provide a solution for all these cases which should be addressed by the relevant ICTV Study Groups, once the principle of binomial species names has been accepted. However, these few problems are not a valid reason for rejecting the

proposal.

6. Adopting the proposed binomial species names implies that a name change would have to occur when species are moved from one genus to another. However, by drawing attention to a new taxonomic placement this is probably a clarifying advantage rather than an alleged disadvantage [12]. Such changes are common in animal, plant and bacterial taxonomy.
7. Since all species names of animals, plants and microorganisms are binomials that always include a genus designation, virus species binomials will be easily recognizable as species names. The vernacular virus names in different languages (measles virus; virus de la rougeole; Masernvirus etc) will be recognized as virus names rather than species names and this will make it easier to distinguish between the two.
8. A major advantage of the proposed system is that inclusion of the genus affiliation in the species name indicates relationships with other viruses and provides additional information about the properties of members of the species. For instance, it would be immediately obvious that hepatitis A, B and C viruses are very different infectious agents belonging to different genera if the corresponding species names were *Hepatitis A hepatovirus*, *Hepatitis B orthohepadnavirus* and *Hepatitis C hepacivirus*. Since all such binomial names for virus species end with the suffix –virus present in the genus name, they also clearly indicate that the names refer to viral entities. This is an advantage compared to the Latin names used in biology which do not indicate to the uninitiated whether the organism referred to is an animal, a plant or a microorganism.
9. The proposed binomial system is not a new idea. The system was used to index the viruses in the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> ICTV reports published in 1976, 1979 and 1982 respectively [16-18] because the benefits of referring to entries like bluetongue orbivirus and West Nile flavivirus must have been obvious already at the time. In the 5<sup>th</sup> ICTV report published in 1991 [19] the binomials were retained only for the indexing of plant viruses. In the 6<sup>th</sup> ICTV report [20] the binomials were dropped altogether because certain animal virologists, for no declared reason, were opposed to their use. Binomial names for referring to viruses rather than to species have always been popular with plant virologists and they have been used in many books [21-24]. However, some animal virologists also use binomials to refer to viruses such as *Bunyamvera orthobunyavirus* [25]. When coining new virus names, the ICTV plant virus Study Groups have always been careful to avoid redundancies between virus names and genus names and, as a result, the proposed binomial species names would lead to very few

problems with plant viruses [11, 14, 15].

10. When the proposal was first made in 1998, most members of the ICTV Executive Board who actually were not plant virologists, were opposed to the introduction of non-Latinized binomial species names [10, 26]. By 2004, half the ICTV Executive Board no longer objected to the system, but when asked about their opinion on binomial names, only a minority of the 80 Study Groups responded [27]. Although in the past, the ICTV often has ratified decisions by accepting that a no answer vote was a vote in favor, this practice was not followed in this case. Surveys conducted in 2002 among laboratory virologists showed that more than 80% of those who responded were in favor of the binomial system [10, 12, 15].
11. Species names in biology are never abbreviated. Since virus species names are used sparingly, they also do not deserve abbreviations. Abbreviations are useful for virus names but these are not affected by the present proposal. Although the ICTV is not responsible for devising appropriate abbreviations, it has published several lists of recommended virus name abbreviations [28-31]. Although one list [31] refers to abbreviations of virus species, these recommendations do all pertain to abbreviations of virus names.
12. Some non-Latinized binomial species names for vertebrate viruses are shown in Table 1. Many examples of possible binomial species names together with the unchanged current virus names are provided as a guideline in the enclosed attachment. This list compiled by Claude Fauquet does not include all the species, genera and families presently recognized by the ICTV since the list only serves to illustrate that the binomial system is widely applicable. Although in many cases such as the ssRNA plant viruses these species names will not be controversial, in a limited number of cases the relevant ICTV Study Groups will have to decide which binomial species names should be adopted.

Table 1: Examples of non-Latinized binomial species names for vertebrate viruses

<b>Virus name</b>	<b>Binomial species name</b>
California encephalitis virus	<i>California encephalitis orthobunyavirus</i>
Hepatitis A virus	<i>Hepatitis A hepatovirus</i>
Hepatitis B virus	<i>Hepatitis B orthohepadnavirus</i>
Hepatitis C virus	<i>Hepatitis C hepacivirus</i>
Hepatitis E virus	<i>Hepatitis E hepevirus</i>
Lassa virus	<i>Lassa arenavirus</i>
Louping ill virus	<i>Louping ill flavivirus</i>
Measles virus	<i>Measles morbillivirus</i>
Mumps virus	<i>Mumps rubulavirus</i>
Rabies virus	<i>Rabies lyssavirus</i>
Rubella virus	<i>Rubella rubivirus</i>
Sendai virus	<i>Sendai respirovirus</i>
Sindbis virus	<i>Sindbis alphavirus</i>
Sin Nombre virus	<i>Sin Nombre Hantavirus</i>
West Nile virus	<i>West Nile flavivirus</i>

MODULE 9: **APPENDIX**: supporting material

additional material in support of this proposal

**References:**

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**References:**

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# Examples of Possible Virus Non-Latinized Binomial Species Names

The species names are grouped by family and genus. All family, genus and species names must be written in italics. Unchanged virus names are written in Roman without capitals except for proper names.

## The dsDNA viruses

Species name	Unchanged virus name
<b>Family : Tectiviridae</b> – <b>genus Tectivirus</b> <i>Enterobacteria PRD1 tectivirus</i>	enterobacteria phage PRD1
<b>Family : Corticoviridae</b> – <b>genus Corticovirus</b> <i>Pseudoalteromonas PM2 corticovirus</i>	pseudoalteromonas phage PM2
<b>Family : Plasmaviridae</b> – <b>genus Plasmavirus</b> <i>Acholeplasma L2 plasmavirus</i>	acholeplasma phage L2
<b>Family : Lipothrrixviridae</b> – <b>genus Alphalipothrrixvirus</b> <i>Thermoproteus tenax1 alphalipothrrixvirus</i>	thermoproteus tenax virus 1
<b>Family : Rudiviridae</b> – <b>genus Rudivirus</b> <i>Sulfolobus islandicus rod-shaped 2 rudivirus</i>	sulfolobus islandicus rod-shaped virus 2
<b>Family : Fuselloviridae</b> – <b>genus Fusellovirus</b> <i>Sulfolobus spindle-shaped 1 fusellovirus</i>	sulfolobus spindle-shaped virus 1
<b>Family : Poxviridae</b> – <b>genus Orthopoxvirus</b> <i>Vaccinia orthopoxvirus</i> <i>Ectromelia orthopoxvirus</i> <i>Variola orthopoxvirus</i>	vaccinia virus ectromelia virus variola virus
– <b>genus Parapoxvirus</b> <i>Orf parapoxvirus</i>	orf virus
– <b>genus Avipoxvirus</b> <i>Fowlpox avipoxvirus</i> <i>Turkeypox avipoxvirus</i>	fowlpox virus turkeypox virus
– <b>genus Capripoxvirus</b> <i>Sheeppox capripoxvirus</i> <i>Lumpy skin disease capripoxvirus</i>	sheeppox virus lumpy skin disease virus
– <b>genus Leporipoxvirus</b>	

*Myxoma leporipoxvirus*  
*Rabbit fibroma leporipoxvirus*

myxoma virus  
rabbit fibroma virus

**- genus suipoxvirus**  
*Swinepox suipoxvirus*

swinepox virus

**- genus Molluscipoxvirus**  
*Molluscum contagiosum molluscipoxvirus*

molluscum contagiosum virus

**- genus Yatapoxvirus**  
*Yaba monkey tumor yatapoxvirus*

Yaba monkey tumor virus

**- genus Alphaentomopoxvirus**  
*Melolontha melolontha alphaentomopoxvirus*

melolontha melolontha entomopoxvirus

**- genus Betaentomopoxvirus**  
*Amsacta moorei betaentomopoxvirus*

amsacta moorei entomopoxvirus

**- genus Gammaentomopoxvirus**  
*Chironomus luridus gammaentomopoxvirus*

chironomus luridus entomopoxvirus

**Family : Asfarviridae**

**– genus Asfivirus**  
*African swine fever asfivirus*

African swine fever virus

**Family : Iridoviridae**

**– genus Iridovirus**  
*Invertebrate iridescent 6 iridovirus*

invertebrate iridescent virus 6

**- genus Chloriridovirus**  
*Invertebrate iridescent 3 chloriridovirus*

invertebrate iridescent virus 3

**- genus Ranavirus**  
*Frog 3 ranavirus*

frog virus 3

**- genus Lymphocystivirus**  
*Lymphocystis disease 1 lymphocystivirus*

lymphocystis disease virus 1

**Family : Phycodnaviridae**

**- genus Chlorovirus**  
*Paramecium bursaria Chlorella 1 chlorovirus*

paramecium bursaria chlorella virus 1

**- genus Prasinovirus**  
*Micromonas pusilla SP prasinovirus*

micromonas pusilla virus SP

**- genus Phaeovirus**  
*Ectocarpus siliculosus 1 phaeovirus*

ectocarpus siliculosus virus 1

**Family : Baculoviridae**

**- genus Granulovirus**  
*Cydia pomonella granulovirus*

cydia pomonella granulovirus

**Family : Herpesviridae**

**- genus Simplexvirus**  
*Human herpes 1 simplexvirus*

human herpesvirus 1

**- genus Varicellovirus**

*Human herpes 3 varicellovirus*

human herpesvirus 3

**- genus Cytomegalovirus**

*Human herpes 5 cytomegalovirus*

human herpesvirus 5

**- genus Muromegalovirus**

*Murid herpes 1 muromegalovirus*

murid herpesvirus 1

**- genus Roseolovirus**

*Human herpes 6 roseolovirus*

human herpesvirus 6

**- genus Lymphocryptovirus**

*Human herpes 4 lymphocryptovirus*

human herpesvirus 4

**- genus Rhadinovirus**

*Saimiriine herpes 2 rhadinovirus*

saimiriine herpesvirus 2

**- genus Ictalurivirus**

*Ictalurid herpes 1 ictalurivirus*

ictalurid herpesvirus 1

**Family : Adenoviridae**

**- genus Mastadenovirus**

*Human adeno C mastadenovirus*

human adenovirus C

**- genus Aviadenovirus**

*Fowl adeno A aviadenovirus*

fowl adenovirus A

**- genus Rhizidiavirus**

*Rhizidiomyces rhizidiavirus*

rhizidiomyces virus

**Family : Polyomaviridae**

**– genus Polyomavirus**

*Simian 40 polyomavirus*

simian virus 40

**Family : Papillomaviridae**

**– genus Alphapapillomavirus**

*Human papilloma 32 alphapapillomavirus*

human papillomavirus 32

**– genus Betapapillomavirus**

*Human papilloma 5 betapapillomavirus*

human papillomavirus 5

**– genus Gammapapillomavirus**

*Human papilloma 4 gammapapillomavirus*

human papillomavirus 4

**Family : Polydnaviridae**

**- genus Bracovirus**

*Cotesia melanoscela bracovirus*

cotesia melanoscela bracovirus

**- genus Ichnovirus**

*Camponotus pennsylvanicus ichnovirus*

camponotus pennsylvanicus ichnovirus

**Family : Ascoviridae**

**– genus Ascovirus**

*Spodoptera frugiperda asco 1a ascovirus*

spodoptera frugiperda ascovirus 1a

# The ssDNA viruses

## Species name

## Unchanged virus name

### **Family : Inoviridae**

#### **- genus Inovirus**

*Enterobacteria M13 inovirus*  
*Enterobacteria X-2 inovirus*  
*Enterobacteria C-2 inovirus*  
*Enterobacteria SF inovirus*  
*Vibrio CTX inovirus*  
*Vibrio VSK inovirus*  
*Pseudomonas Pfi inovirus*  
*Xanthomonas Cf16 inovirus*  
*Xanthomonas Xf inovirus*

enterobacteria phage M13  
 enterobacteria phage X-2  
 enterobacteria phage C-2  
 enterobacteria phage SF  
 vibrio phage CTX  
 vibrio phage VSK  
 pseudomonas phage Pfi  
 xanthomonas phage Cf16  
 xanthomonas phage Xf

#### **- genus Plectrovirus**

*Acholeplasma L51 plectrovirus*  
*Spiroplasma 1-KC3 plectrovirus*

acholeplasma phage L51  
 spiroplasma phage 1-KC3

#### **- genus Microvirus**

*Enterobacteria phiX 174 microvirus*

enterobacteria phage phiX 174

#### **- genus Spiromicrovirus**

*Spiroplasma 4 spiromicrovirus*

spiroplasma phage 4

#### **- genus Bdellovibrio**

*Bdellovibrio MAC 1 bdellovibrio*

bdellovibrio phage MAC 1

#### **- genus Chlamydia**

*Chlamydia 1 chlamydia*

chlamydia phage 1

### **Family : Geminiviridae**

#### **- genus Mastrevirus**

*Maize streak mastrevirus*  
*Sugarcane streak mastrevirus*  
*Tobacco yellow dwarf mastrevirus*

maize streak virus  
 sugarcane streak virus  
 tobacco yellow dwarf virus

#### **- genus Curtovirus**

*Beet curly top curtovirus*

beet curly top virus

#### **- genus Topocuvirus**

*Tomato pseudo-curly top topocuvirus*

tomato pseudo-curly top virus

#### **- genus Begomovirus**

*Bean golden mosaic begomovirus*  
*Cowpea golden mosaic begomovirus*  
*Mungbean yellow mosaic begomovirus*  
*Squash leaf curl begomovirus*  
*Tomato leaf curl begomovirus*  
*Tomato mottle begomovirus*

bean golden mosaic virus  
 cowpea golden mosaic virus  
 mungbean yellow mosaic virus  
 squash leaf curl virus  
 tomato leaf curl virus  
 tomato mottle virus

### **Family : Circoviridae**

#### **- genus Circovirus**

*Beak and feather disease circovirus*  
*Porcine 1 circovirus porcine circovirus 1*

beak and feather disease virus

– <b>genus Gyrovirus</b> <i>Chicken anemia gyrovirus</i>	chicken anemia virus
<b>Family : Nanoviridae</b> – <b>genus Babuvirus</b> <i>Banana bunchy top babuvirus</i>	banana bunchy top virus
– <b>genus Nanovirus</b> <i>Subterranean clover stunt nanovirus</i>	subterranean clover stunt virus
<b>Family : Parvoviridae</b> – <b>genus Parvovirus</b> <i>Mice minute parvovirus</i> <i>Feline panleukopenia parvovirus</i>	minute virus of mice feline panleukopenia virus
– <b>genus Erythrovirus</b> <i>Human parvo B19 erythrovirus</i>	human parvovirus B19
– <b>genus Dependovirus</b> <i>Adeno-associated 2 dependovirus</i> <i>Avian adeno-associated dependovirus</i>	adeno-associated virus 2 avian adeno-associated virus
– <b>genus Densovirus</b> <i>Junonia coenia densovirus</i>	junonia coenia densovirus
– <b>genus Iteravirus</b> <i>Bombyx mori iteravirus</i>	bombyx mori densovirus
– <b>genus Brevidensovirus</b> <i>Aedes aegypti brevidensovirus</i>	aedes aegypti densovirus
– <b>genus Amdovirus</b> <i>Aleutian mink disease amdovirus</i>	Aleutian mink disease virus
– <b>genus Bocavirus</b> <i>Bovine parvo bocavirus</i>	bovine parvovirus
– <b>genus Pefudensovirus</b> <i>Periplaneta fuliginosa pefudensovirus</i>	periplaneta fuliginosa densovirus
<b>Family : Anelloviridae</b> – <b>genus Alphatorquevirus</b> <i>Torque teno 1 alphatorquevirus</i>	torque teno virus 1

## Retrotranscribing DNA and RNA viruses

Species name	Unchanged virus name
<b>Family : Hepadnaviridae</b> – <b>genus Orthohepadnavirus</b> <i>Hepatitis B orthohepadnavirus</i>	hepatitis B virus

– **genus Avihepadnavirus**

*Duck hepatitis B avihepadnavirus*

duck hepatitis B virus

**Family Caulimoviridae**

– **genus Caulimovirus**

*Cauliflower mosaic caulimovirus*

*Mirabilis mosaic caulimovirus*

cauliflower mosaic virus

mirabilis mosaic virus

– **genus Petuvirus**

*Petunia vein clearing petuvirus*

petunia vein clearing virus

– **genus Soymovirus**

*Soybean chlorotic mottle soymovirus*

soybean chlorotic mottle virus

– **genus Cavemovirus**

*Cassava vein mosaic cavemovirus*

cassava vein mosaic virus

– **genus Badnavirus**

*Banana streak badnavirus*

*Commelina yellow mottle badnavirus*

banana streak virus

commelina yellow mottle virus

– **genus Tungrovirus**

*Rice tungro bacilliform tungrovirus*

rice tungro bacilliform virus

**Family : Pseudoviridae**

– **genus Pseudovirus**

*Saccharomyces cerevisiae Ty1 pseudovirus*

saccharomyces cerevisiae virus Ty1

– **genus Hemivirus**

*Drosophila melanogaster copia hemivirus*

drosophila melanogaster copia virus

**Family : Metaviridae**

– **genus Metavirus**

*Saccharomyces cerevisiae Ty3 metavirus*

saccharomyces cerevisiae virus Ty3

– **genus Errantivirus**

*Drosophila melanogaster gypsy errantivirus*

drosophila melanogaster gypsy virus

**Family : Retroviridae**

– **genus Alpharetrovirus**

*Avian leukosis alpharetrovirus*

avian leukosis virus

– **genus Betaretrovirus**

*Mouse mammary tumor betaretrovirus*

mouse mammary tumor virus

– **genus Gammaretrovirus**

*Murine leukemia gammaretrovirus*

murine leukemia virus

– **genus Deltaretrovirus**

*Bovine leukemia deltaretrovirus*

bovine leukemia virus

– **genus Epsilonretrovirus**

*Walleye dermal sarcoma epsilonretrovirus*

walleye dermal sarcoma virus

– **genus Lentivirus**

*Human immunodeficiency 1 lentivirus*

human immunodeficiency virus 1

*Human immunodeficiency 2 lentivirus*  
*Simian immunodeficiency lentivirus*

human immunodeficiency virus 2  
simian immunodeficiency virus

– **genus Spumaretrovirus**  
*Simian foamy spumaretrovirus*

simian foamy virus

## The dsRNA viruses

### Species name

### Unchanged virus name

#### **Family : Cystoviridae**

##### – **genus Cystovirus**

*Pseudomonas phi6 cystovirus*

pseudomonas phage phi6

#### **Family Reoviridae**

##### - **genus Orbivirus**

*African horse sickness orbivirus*

*Bluetongue orbivirus*

African horse sickness virus

bluetongue virus

##### - **genus Rotavirus**

*Rota A rotavirus*

*Simian SA 11 rotavirus*

rotavirus A

simian rotavirus SA 11

##### - **genus Coltivirus**

*Colorado tick fever coltivirus*

Colorado tick fever virus

##### - **genus Aquareovirus**

*Aquareo A Aquareovirus*

aquareovirus A

##### - **genus Cypovirus**

*Cypo 1, Cypovirus*

cypovirus 1

##### - **genus Fijivirus**

*Fiji disease fijivirus*

*Garlic dwarf fijivirus*

Fiji disease virus

garlic dwarf virus

##### - **genus Phytoreovirus**

*Wound tumor phytoreovirus*

wound tumor virus

##### - **genus Oryzavirus**

*Rice ragged stunt oryzavirus*

rice ragged stunt virus

#### **Family Birnaviridae**

##### - **genus Aquabirnavirus**

*Infectious pancreatic necrosis aquabirnavirus*

infectious pancreatic necrosis virus

##### - **genus Avibirnavirus**

*Infectious bursal disease avibirnavirus*

infectious bursal disease virus

##### - **genus Entomobirnavirus**

*Drosophila X entomobirnavirus*

drosophila X virus

#### **Family Totiviridae**



<b>- genus Totivirus</b> <i>Saccharomyces cerevisiae L-A totivirus</i>	saccharomyces cerevisiae virus L-A
<b>- genus Giardiavirus</b> <i>Giardia lamblia giardiavirus</i>	giardia lamblia virus
<b>- genus Leishmanivirus</b> <i>Leishmania RNA 1 – 1 leishmanivirus</i>	leishmania RNA virus 1 – 1
<b>Family Hypoviridae</b> <b>- genus Hypovirus</b> <i>Cryphonectria hypovirus 1 hypovirus</i>	cryphonectria hypovirus 1
<b>Family Chrysoviridae</b> <b>- genus Chrysovirus</b> <i>Penicillium chrysogenum chrysovirus</i>	penicillium chrysogenum virus
<b>Family Partitiviridae</b> <b>– genus Partitivirus</b> <i>Atkinsonella hypoxylon partitivirus</i>	atkinsonella hypoxylon virus
<b>– genus Alphacryptovirus</b> <i>White clover cryptic 1 alphacryptovirus</i>	white clover cryptic virus 1
<b>– genus Betacryptovirus</b> <i>White clover cryptic 2 betacryptovirus</i>	white clover cryptic virus 2
<b>– genus Varicosavirus</b> <i>Lettuce big-vein associated varicosavirus</i>	lettuce big-vein associated virus

## The negative sense ssRNA viruses

Species name	Unchanged virus name
<b>Family Bornaviridae</b> <b>– genus Bornavirus</b> <i>Borna disease bornavirus</i>	borna disease virus
<b>Family Filoviridae</b> <b>- genus Marburgvirus</b> <i>Marburg marburgvirus</i>	Marburg virus
<b>- genus Ebolavirus</b> <i>Reston ebolavirus</i>	Reston virus
<b>Family Paramyxoviridae</b> <b>- genus Respirovirus</b> <i>Human parainfluenza 1 respirovirus</i> <i>Sendai respirovirus</i>	human parainfluenza virus 1 Sendai virus
<b>- genus Rubulavirus</b> <i>Mumps rubulavirus</i>	mumps virus

*Simian 5 rubulavirus*

simian virus 5

**- genus Avulavirus**

*Newcastle disease avulavirus*

Newcastle disease virus

**- genus Morbillivirus**

*Measles morbillivirus*

measles virus

*Rinderpest morbillivirus*

rinderpest virus

**- genus Henipavirus**

*Hendra henipavirus*

Hendra virus

**- genus Pneumovirus**

*Human respiratory syncytial pneumovirus*

human respiratory syncytial virus

**Family Rhabdoviridae**

**- genus Vesiculovirus**

*Vesicular stomatitis Indiana vesiculovirus*

vesicular stomatitis Indiana virus

**- genus Lyssavirus**

*Rabies lyssavirus*

rabies virus

**- genus Ephemerovirus**

*Bovine ephemeral fever ephemerovirus*

bovine ephemeral fever virus

**- genus Cytorhabdovirus**

*Lettuce necrotic yellows cytorhabdovirus*

lettuce necrotic yellows virus

**- genus Nucleorhabdovirus**

*Potato yellow dwarf nucleorhabdovirus*

potato yellow dwarf virus

**Family Orthomyxoviridae**

**- genus Alphainfluenzavirus**

*Influenza A alphainfluenzavirus*

influenza virus A

**- genus Betainfluenzavirus**

*Influenza B betainfluenzavirus*

influenza virus B

**- genus Gammainfluenzavirus**

*Influenza C gammainfluenzavirus*

influenza virus C

**- genus Thogotovirus**

*Thogoto thogotovirus*

Thogoto virus

**- genus Isavirus**

*Infectious salmon anemia isavirus*

infectious salmon anemia virus

**Family Bunyaviridae**

**- genus Orthobunyavirus**

*Bunyamwera orthobunyavirus*

Bunyamwera virus

**- genus Hantavirus**

*Hantaan hantavirus*

Hantaan virus

*Sin Nombre hantavirus*

sin nombre virus

**- genus Nairovirus**

*Dugbe nairovirus*

Dugbe virus

**- genus Phlebovirus**

Rift Valley fever phlebovirus  
- **genus Tospovirus**  
Tomato spotted wilt tospovirus

Rift Valley fever virus  
tomato spotted wilt virus

**Family Arenaviridae**  
- **genus Arenavirus**  
Lymphocytic choriomeningitis arenavirus

lymphocytic choriomeningitis virus

**Unassigned Family**  
– **genus Tenuivirus**  
Rice stripe tenuivirus

rice stripe virus

## The positive sense ssRNA viruses

### Species name

### Unchanged virus name

**Family Leviviridae**  
- **genus Levivirus**  
Enterobacteria BZ13 levivirus

enterobacteria phage BZ13

**Family Narnaviridae**  
- **genus Narnavirus**  
Saccharomyces 20S RNA narnavirus

saccharomyces 20S RNA narnavirus

- **genus Mitovirus**  
Cryphonectria 1 mitovirus  
**Family Picornaviridae**  
- **genus Enterovirus**  
Human polio 1 enterovirus

cryphonectria mitovirus 1

human poliovirus 1

- **genus Cardiovirus**  
Encephalomyocarditis cardiovirus

encephalomyocarditis virus

- **genus Aphthovirus**  
Foot-and-mouth disease aphthovirus

foot-and-mouth disease virus

- **genus Hepatovirus**  
Hepatitis A hepatovirus

hepatitis virus A

- **genus Parechovirus**  
Human parecho parechovirus

human parechovirus 1

- **genus Erbovirus**  
Equine rhinitis B erbovirus

equine rhinitis B virus

- **genus Kobuvirus**  
Aichi kobuvirus

Aichi virus

- **genus Teschovirus**  
Porcine tescho teschovirus

porcine teschovirus 1

### **Family Dicistroviridae**

#### **- genus Cripavirus**

*Cricket paralysis cripavirus*

cricket paralysis virus

### **Family Sequiviridae**

#### **- genus Sequivirus**

*Parsnip yellow fleck sequivirus*

parsnip yellow fleck virus

### **Family Comoviridae**

#### **– genus Comovirus**

*Cowpea mosaic comovirus*

*Squash mosaic comovirus*

cowpea mosaic virus

squash mosaic virus

#### **– genus Fabavirus**

*Broad bean wilt 1 fabavirus*

broad bean wilt virus 1

#### **– genus Nepovirus**

*Arabis mosaic nepovirus*

*Grapevine fanleaf nepovirus*

*Tobacco ringspot nepovirus*

*Tomato black ring nepovirus*

arabis mosaic virus

grapevine fanleaf virus

tobacco ringspot virus

tomato black ring virus

### **Family Potyviridae**

#### **– genus Potyvirus**

*Potato Y potyvirus*

*Bean common mosaic potyvirus*

*Henbane mosaic potyvirus*

*Johnsongrass mosaic potyvirus*

*Lettuce mosaic potyvirus*

*Papaya ringspot potyvirus*

*Plum pox potyvirus*

*Sugarcane mosaic potyvirus*

*Tobacco etch potyvirus*

*Watermelon mosaic potyvirus*

potato virus Y

bean common mosaic virus

henbane mosaic virus

johnsongrass mosaic virus

lettuce mosaic virus

papaya ringspot virus

plum pox virus

sugarcane mosaic virus

tobacco etch virus

watermelon mosaic virus

#### **– genus Ipomovirus**

*Sweet potato mild mottle ipomovirus*

sweet potato mild mottle virus

#### **– genus Macluravirus**

*Maclura mosaic macluravirus*

maclura mosaic virus

#### **– genus Rymovirus**

*Ryegrass mosaic rymovirus*

ryegrass mosaic virus

#### **– genus Tritimovirus**

*Wheat streak mosaic tritimovirus*

wheat streak mosaic virus

#### **– genus Bymovirus**

*Barley yellow mosaic bymovirus*

barley yellow mosaic virus

### **Family Caliciviridae**

#### **– genus Lagovirus**

*Rabbit hemorrhagic disease lagovirus*

rabbit hemorrhagic disease virus

#### **– genus Norovirus**

*Norwalk norovirus*

Norwalk virus

– **genus Sapovirus**

*Sapporo sapovirus*

Sapporo virus

– **genus Vesivirus**

*Swine vesicular exanthema vesivirus*

swine vesicular exanthema virus

**Family Astroviridae**

– **genus Mamastrovirus**

*Human astro mamastrovirus*

human astrovirus 1

**Family Nodaviridae**

– **genus Alphanodavirus**

*Flock House alphanodavirus*

Flock House virus

**Family Tetraviridae**

– **genus Betatetravirus**

*Trichoplusia ni betatetravirus*

trichoplusia ni virus

– **genus Omegatetravirus**

*Helicoverpa armigera stunt omegatetravirus*

helicoverpa armigera stunt virus

**Family Luteoviridae**

– **genus Luteovirus**

*Barley yellow dwarf MAV luteovirus*

barley yellow dwarf MAV virus

– **genus Polerovirus**

*Potato leafroll polerovirus*

potato leafroll virus

– **genus Enamovirus**

*Pea enation mosaic 1 enamovirus*

pea enation mosaic virus 1

**Family Tombusviridae**

– **genus Carmovirus**

*Carnation mottle carmovirus*

carnation mottle virus

– **genus Dianthovirus**

*Carnation ringspot dianthovirus*

carnation ringspot virus

– **genus Machlomovirus**

*Maize chlorotic mottle machlomovirus*

maize chlorotic mottle virus

– **genus Necrovirus**

*Tobacco necrosis A necrovirus*

tobacco necrosis virus A

– **genus Panicovirus**

*Panicum mosaic panicovirus*

panicum mosaic virus

– **genus Tombusvirus**

*Cymbidium ringspot tombusvirus*

cymbidium ringspot virus

*Tomato bushy stunt tombusvirus*

tomato bushy stunt virus

**Family Coronaviridae**

– **genus Bafinivirus**

*White Bream bafinivirus*

white bream virus

– **genus Torovirus**

*Equine toro torovirus*

equine torovirus

**Family Arteriviridae**

– **genus Arterivirus**

*Equine arteritis arterivirus*

equine arteritis virus

**Family Flaviviridae**

– **genus Flavivirus**

*Louping ill flavivirus*

*Dengue flavivirus*

*St. Louis encephalitis flavivirus*

*West Nile flavivirus*

*Yellow fever flavivirus*

louping ill virus

dengue virus

St. Louis encephalitis virus

West Nile virus

yellow fever virus

– **genus Pestivirus**

*Bovine viral diarrhea 1 pestivirus*

bovine viral diarrhea virus 1

– **genus Hepacivirus**

*Hepatitis C hepacivirus*

hepatitis virus C

**Family Togaviridae**

– **genus Alphavirus**

*Chikungunya alphavirus*

*Semliki Forest alphavirus*

*Sindbis alphavirus*

*Western equine encephalitis alphavirus*

Chikungunya virus

Semliki Forest virus

sindbis virus

Western equine encephalitis virus

– **genus Rubivirus**

*Rubella rubivirus*

rubella virus

**Family : Bromoviridae**

– **genus Alfamovirus**

*Alfalfa mosaic alfamovirus*

Alfalfa mosaic virus

– **genus Bromovirus**

*Brome mosaic bromovirus*

*Cowpea chlorotic mottle bromovirus*

brome mosaic virus

cowpea chlorotic mottle virus

– **genus Cucumovirus**

*Cucumber mosaic cucumovirus*

*Peanut stunt cucumovirus*

cucumber mosaic virus

peanut stunt virus

– **genus Ilarvirus**

*Apple mosaic ilarvirus*

*Hydrangea mosaic ilarvirus*

*Prune dwarf ilarvirus*

*Tobacco streak ilarvirus*

apple mosaic virus

hydrangea mosaic virus

prune dwarf virus

tobacco streak virus

– **genus Oleavirus**

*Olive latent 2 oleavirus*

olive latent virus 2

**Family Closteroviridae**

– **genus Ampelovirus**

*Grapevine leafroll-associated 3 ampelovirus*

grapevine leafroll-associated virus 3

– **genus Closterovirus**

*Citrus tristeza closterovirus*

citrus tristeza virus

– **genus Crinivirus**

*Lettuce chlorosis crinivirus*

lettuce chlorosis virus

**Family : Tymoviridae**

– **genus Tymovirus**

*Okra mosaic tymovirus*

*Turnip yellow mosaic tymovirus*

*Wild cucumber mosaic tymovirus*

okra mosaic virus

turnip yellow mosaic virus

wild cucumber mosaic virus

– **genus Maculavirus**

*Grapevine fleck maculavirus*

grapevine fleck virus

– **genus Marafivirus**

*Maize rayado fino marafivirus*

maize rayado fino virus

**Family : Alphaflexiviridae**

– **genus Potexvirus**

*Cymbidium mosaic potexvirus*

*Hydrangea ringspot potexvirus*

*Papaya mosaic potexvirus*

*Potato X potexvirus*

*White clover mosaic potexvirus*

cymbidium mosaic virus

hydrangea ringspot virus

papaya mosaic virus

potato virus X

white clover mosaic virus

– **genus Allxivirus**

*Shallot X allxivirus*

shallot virus X

**Family : Betaflexiviridae**

– **genus Foveavirus**

*Apple stem pitting foveavirus*

apple stem pitting virus

– **genus Carlavirus**

*Carnation latent carlavirus*

*Hop mosaic carlavirus*

*Pea streak carlavirus*

*Potato S carlavirus* potato virus S

carnation latent virus

hop mosaic virus

pea streak virus

– **genus Capillovirus**

*Apple stem grooving capillovirus*

apple stem grooving virus

– **genus Vitivirus**

*Grapevine A vitivirus*

grapevine virus A

– **genus Trichovirus**

*Apple chlorotic leaf spot trichovirus*

apple chlorotic leaf spot virus

**Family : Virgaviridae**

– **genus Tobamovirus**

*Odontoglossum ringspot tobamovirus*

*Ribgrass mosaic tobamovirus*

*Tobacco mosaic tobamovirus*

*Tomato mosaic tobamovirus*

*Cucumber green mottle mosaic tobamovirus*

odontoglossum ringspot virus

ribgrass mosaic virus

tobacco mosaic virus

tomato mosaic virus

cucumber green mottle mosaic virus

– **genus Tobravirus**

*Tobacco rattle tobavirus*

tobacco rattle virus

– **genus *Hordeivirus***

*Barley stripe mosaic hordeivirus*

barley stripe mosaic virus

– **genus *Furovirus***

*Soil-borne wheat mosaic furovirus*

soil-borne wheat mosaic virus

– **genus *Pomovirus***

*Potato mop-top pomovirus*

potato mop-top virus

– **genus *Pecluvirus***

*Peanut clump pecluvirus*

peanut clump virus

**Unassigned family :**

– **genus *Benyvirus***

*Beet necrotic yellow vein benyvirus*

beet necrotic yellow vein virus

– **genus *Ourmiavirus***

*Ourmia melon ourmiavirus*

ourmia melon virus

– **genus *Idaeovirus***

*Raspberry bushy dwarf idaeovirus*

raspberry bushy dwarf virus

**Annex:**

Include as much information as necessary to support the proposal, including diagrams comparing the old and new taxonomic orders. The use of Figures and Tables is strongly recommended but direct pasting of content from publications will require permission from the copyright holder together with appropriate acknowledgement as this proposal will be placed on a public web site. For phylogenetic analysis, try to provide a tree where branch length is related to genetic distance.