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

Code assigned:	*2010.001a-kkkV*	(to be completed by ICTV officers)

Short title: Rationalization and extension of the family Papillomaviridae
(e.g. 6 new species in the genus *Zetavirus*)

| **Modules attached** (modules 1 and 9 are required) | 1 ☒ | 2 ☒ | 3 ☒ | 4 ☐ | 5 ☐ |
| | 6 ☐ | 7 ☒ | 8 ☒ | 9 ☒ | |

Author(s) with e-mail address(es) of the proposer:

Hans-Ulrich Bernard <hbernard@uci.edu> and the Papillomaviridae Study Group

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)	Papillomaviridae

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

Date first submitted to ICTV:
Date of this revision (if different to above): 2 November 2010

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001aV*	(assigned by ICTV officers)

To create 1 new species within:

		Fill in all that apply.
Genus:	*Betapapillomavirus*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Betapapillomavirus 6

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Macaca fascicularis papillomavirus 2 (GU014531). See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new
species must be placed in a higher taxon. This is usually a genus although it is also permissible for
species to be "unassigned" within a subfamily or family.

Code	*2010.001bV*	(assigned by ICTV officers)

To create 5 new species within:

		Fill in all that apply.
Genus:	*Gammapapillomavirus*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Gammapapillomavirus 6
Gammapapillomavirus 7
Gammapapillomavirus 8
Gammapapillomavirus 9
Gammapapillomavirus 10

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Human papillomavirus 101 (DQ080081), human papillomavirus 109 (EU541441), human
papillomavirus 112 (EU541442), human papillomavirus 116 (FJ804072), human
papillomavirus 121 (GQ845443), respectively. See Module 9.

creating and naming one or more new species.

If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001cV*	(assigned by ICTV officers)

To create 1 new species within:

Fill in all that apply.

Genus:	*Deltapapillomavirus*
Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no genus is specified, enter "**unassigned**" in the genus box.

And name the new species:

Deltapapillomavirus 5

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Capreolus capreolus papillomavirus 1 (EF680235). See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001dV*	(assigned by ICTV officers)

To create 2 new species within:

		Fill in all that apply.
Genus:	*Lambdapapillomavirus*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Lambdapapillomavirus 3
Lambdapapillomavirus 4

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Canis familiaris papillomavirus 6 (FJ492743), Procyon lotor papillomavirus 1 (AY763115), respectively. See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001eV*	(assigned by ICTV officers)

To create 1 new species within:

Genus:	*Pipapillomavirus*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Pipapillomavirus 2

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Micromys minutus papillomavirus 1 (DQ269468). See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001fV*	(assigned by ICTV officers)

To create 1 new species within:

Genus:	*Rhopapillomavirus (new)*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	
Order:	*Unassigned*	• If no genus is specified, enter "**unassigned**" in the genus box.

And name the new species:

Rhopapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Trichechus manatus papillomavirus 1 (AY609301). See Module 9.

creating and naming one or more new species.

If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001gV*	(assigned by ICTV officers)

To create 1 new species within:

Genus:	*Sigmapapillomavirus (new)*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Sigmapapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Erethizon dorsatum papillomavirus 1 (AY684126). See Module 9.

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001hV*	(assigned by ICTV officers)

To create 1 new species within:

		Fill in all that apply.
Genus:	*Taupapillomavirus (new)*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Taupapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Canis familiaris papillomavirus 2 (AY722648). See Module 9.

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001iV*	(assigned by ICTV officers)

To create 2 new species within:

Genus:	*Upsilonpapillomavirus (new)*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Upsilonpapillomavirus 1
Upsilonpapillomavirus 2

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Tursiops truncatus papillomavirus 1 (EU240894), Tursiops truncatus papillomavirus 2 (AY956402), respectively. See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001jV*	(assigned by ICTV officers)

To create 1 new species within:

		Fill in all that apply.
Genus:	*Phipapillomavirus (new)*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Phipapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Capra hircus papillomavirus 1 (DQ091200). See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001kV*	(assigned by ICTV officers)

To create 2 new species within:

Genus:	*Chipapillomavirus (new)*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	• If no genus is specified, enter
Order:	*Unassigned*	"**unassigned**" in the genus box.

And name the new species:

Chipapillomavirus 1
Chipapillomavirus 2

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Canis familiaris papillomavirus 3 (DQ295066), Canis familiaris papillomavirus 4 (EF584537). See Module 9.

MODULE 2: **<u>NEW SPECIES</u>**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001lV*	(assigned by ICTV officers)

To create 1 new species within:

Fill in all that apply.

Genus:	*Psipapillomavirus (new)*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Psipapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
    - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
    - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Rousettus aegyptiacus papillomavirus 1 (DQ366842). See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001mV*	(assigned by ICTV officers)

To create 1 new species within:

		Fill in all that apply.
Genus:	*Omegapapillomavirus (new)*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Omegapapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Ursus maritimus papillomavirus 1 (EF536349). See Module 9.

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001nV*	(assigned by ICTV officers)

To create 1 new species within:

		Fill in all that apply.
Genus:	*Dyodeltapapillomavirus (new)*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Dyodeltapapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Sus scrofa papillomavirus 1 (EF395818). See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001oV*	(assigned by ICTV officers)

To create 1 new species within:

Genus:	*Dyoepsilonpapillomavirus (new)*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Dyoepsilonpapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Francolinus leucoscepus papillomavirus 1 (EU188799). See Module 9.

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001pV*	(assigned by ICTV officers)

To create 1 new species within:

		Fill in all that apply.
Genus:	*Dyozetapapillomavirus (new)*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Dyozetapapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Caretta caretta papillomavirus 1 (EU493092). See Module 9.

creating and naming one or more new species.

If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001qV*	(assigned by ICTV officers)

To create 1 new species within:

Genus:	*Dyoetapapillomavirus (new)*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Dyoetapapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Erinaceus europaeus papillomavirus 1 (FJ379293). See Module 9.

creating and naming one or more new species.

If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001rV*	(assigned by ICTV officers)

To create 1 new species within:

Genus:	*Dyothetapapillomavirus (new)*	Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Dyothetapapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Felis domesticus papillomavirus 2 (EU796884). See Module 9.

creating and naming one or more new species.
If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be "unassigned" within a subfamily or family.

Code	*2010.001sV*	(assigned by ICTV officers)

To create 1 new species within:

		Fill in all that apply.
Genus:	*Dyoiotapapillomavirus (new)*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	• If no genus is specified, enter "**unassigned**" in the genus box.
Order:	*Unassigned*	

And name the new species:

Dyoiotapapillomavirus 1

Reasons to justify the creation and assignment of the new species:
- Explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria**.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

Equus caballus papillomavirus 2 (EU503122). See Module 9.

MODULE 3: **NEW GENUS**

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001tV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001uV*	(assigned by ICTV officers)

To name the new genus: *Rhopapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001vV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Rhopapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001wV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001xV*	(assigned by ICTV officers)

To name the new genus: *Sigmapapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001yV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Sigmapapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

creating a new genus

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001zV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001aaV*	(assigned by ICTV officers)

To name the new genus: *Taupapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001bbV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Taupapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **<u>NEW GENUS</u>**

creating a new genus

Code	*2010.001ccV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001ddV*	(assigned by ICTV officers)

To name the new genus: *Upsilonpapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001eeV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Upsilonpapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

2

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

First recognized virus in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

See Module 9

MODULE 3: **NEW GENUS**

creating a new genus

Code	*2010.001ffV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001ggV*	(assigned by ICTV officers)

To name the new genus: *Phipapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001hhV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Phipapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

creating a new genus

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001iiV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001jjV*	(assigned by ICTV officers)

To name the new genus: *Chipapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001kkV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Chipapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

2

Reasons to justify the creation of a new genus:

Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

First recognized virus in genus

Species demarcation criteria in the new genus:

If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

See Module 9

MODULE 3: **<u>NEW GENUS</u>**

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001llV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.
- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

Code	*2010.001mmV*	(assigned by ICTV officers)

To name the new genus: *Psipapillomavirus*

Code	*2010.001nnV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Psipapillomavirus 1

Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001ooV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

Code	*2010.001ppV*	(assigned by ICTV officers)

To name the new genus: *Omegapapillomavirus*

Code	*2010.001qqV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Omegapapillomavirus 1

Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **<u>NEW GENUS</u>**

creating a new genus

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001rrV*	(assigned by ICTV officers)

To create a new genus within:

		Fill in all that apply.
Subfamily:	*Unassigned*	• If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
Family:	*Papillomaviridae*	
Order:	*Unassigned*	• If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001ssV*	(assigned by ICTV officers)

To name the new genus: *Dyodeltapapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001ttV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Dyodeltapapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:

Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix, second time (dyo) round

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:

If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **<u>NEW GENUS</u>**

creating a new genus
Ideally, a genus should be placed within a higher taxon.

Code	*2010.001uuV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.
- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

naming a new genus

Code	*2010.001vvV*	(assigned by ICTV officers)

To name the new genus: *Dyoepsilonpapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001wwV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Dyoepsilonpapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix, second time (dyo) round

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001xxV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.
- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

naming a new genus

Code	*2010.001yyV*	(assigned by ICTV officers)

To name the new genus: *Dyozetapapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001zzV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Dyozetapapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix, second time (dyo) round

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

creating a new genus

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001aaaV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

naming a new genus

Code	*2010.001bbbV*	(assigned by ICTV officers)

To name the new genus: *Dyoetapapillomavirus*

Assigning the type species and other species to a new genus

Code	*2010.001cccV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Dyoetapapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix, second time (dyo) round

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001dddV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*	
Family:	*Papillomaviridae*	
Order:	*Unassigned*	

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

Code	*2010.001eeeV*	(assigned by ICTV officers)

To name the new genus: *Dyothetapapillomavirus*

Code	*2010.001fffV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Dyothetapapillomavirus 1	Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix, second time (dyo) round

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 3: **NEW GENUS**

Ideally, a genus should be placed within a higher taxon.

Code	*2010.001gggV*	(assigned by ICTV officers)

To create a new genus within:

Fill in all that apply.

Subfamily:	*Unassigned*
Family:	*Papillomaviridae*
Order:	*Unassigned*

- If the higher taxon has yet to be created (in a later module, below) write "**(new)**" after its proposed name.
- If no family is specified, enter "**unassigned**" in the family box

Code	*2010.001hhhV*	(assigned by ICTV officers)

To name the new genus: *Dyoiotapapillomavirus*

Code	*2010.001iiiV*	(assigned by ICTV officers)

To designate the following as the type species of the new genus

Dyoiotapapillomavirus 1

Every genus must have a type species. This should be a well characterized species although not necessarily the first to be discovered

The new genus will also contain any other new species created and assigned to it (Module 2) and any that are being moved from elsewhere (Module 7b). **Please enter here the TOTAL number of species (including the type species) that the genus will contain:**

1

Reasons to justify the creation of a new genus:
Additional material in support of this proposal may be presented in the Appendix, Module 9

See Module 9

Origin of the new genus name:

Progression of Greek alphabetic prefix, second time (dyo) round

Reasons to justify the choice of type species:

Single species in genus

Species demarcation criteria in the new genus:
If there will be more than one species in the new genus, list the criteria being used for species demarcation and explain how the proposed members meet these criteria.

MODULE 7: **REMOVE and MOVE**

Part (a) taxon/taxa to be removed or moved

Code	*2010.001jjjV*	(assigned by ICTV officers)

To remove the following taxon (or taxa) from their present position:

Human papillomavirus 71

The present taxonomic position of these taxon/taxa:

Genus:	*Alphapapillomavirus*	
Subfamily:	*Unassigned*	Fill in all that apply.
Family:	*Papillomaviridae*	
Order:	*Unassigned*	

If the taxon/taxa are to be abolished (i.e. not reassigned to another taxon) write "yes" in the box on the right	**YES**

Reasons to justify the removal:
Explain why the taxon (or taxa) should be removed

Under the species demarcation criteria, human papillomaviruses 71 and cand90 belong to a single species. It is proposed that the existing species name, *Human papillomavirus cand90* (renamed *Human papillomavirus 90* as proposed below) be utilized for these two viruses.

Part (b) re-assign to a higher taxon

Code		(assigned by ICTV officers)

To re-assign the taxon (or taxa) listed in Part (a) as follows:

Fill in all that apply.
- If the higher taxon has yet to be created write "**(new)**" after its proposed name and complete relevant module to create it.

If no genus is specified, enter "**unassigned**" in the genus box.

Genus:	
Subfamily:	
Family:	
Order:	

Reasons to justify the re-assignment:
- If it is proposed to re-assign species to an existing genus, please explain how the proposed species differ(s) from all existing species.
  - If species demarcation criteria (see module 3) have previously been defined for the genus, explain how the new species meet these criteria.
  - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Provide accession numbers for genomic sequences
- Further material in support of this proposal may be presented in the Appendix, Module 9

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	*2010.001kkkV*	(assigned by ICTV officers)

Title of proposal: *Renaming of species in the family Papillomaviridae*

Text of proposal:

Papillomavirologists have been subjected to two parallel systems for species names. These are described in Table 3 of Bernard *et al.* (2010). One scheme is informal, and merely takes the genus name and extends it by a series of numbers (e.g. *Alphapapillomavirus 1* in the genus *Alphapapillomavirus*). The other scheme is formal, having been published in the ICTV 8th Report, and consists of raising the name of one virus in a species to be the species name (e.g. *Human papillomavirus 31* in the genus *Alphapapillomavirus*). The formal scheme suffers from serious flaws. First, it falsely implies some kind of priority for the subset of papillomaviruses whose names are raised to those of species. Second, it has not been adopted in the field, whereas the informal scheme is used widely. Third, it leads to confusion because species names and virus names are distinguishable only by the use of italic font in the former. This creates particular problems for databases such as GenBank, which does not utilize italic font; in this regard, see current proposal 2010.001aG.N.v1.Unique_names.pdf.

The proposal is to replace the current system by the informal system, which requires every existing papillomavirus species name to change. The following list shows the present versus the proposed species names in the family *Papillomaviridae*. Blanks under "Present species name" indicate species that have not yet been classified. New genera and type species are in bold.

Genus	Present species name	Proposed species name
Alphapapillomavirus	**Human papillomavirus 32**	**Alphapapillomavirus 1**
Alphapapillomavirus	*Human papillomavirus 10*	*Alphapapillomavirus 2*
Alphapapillomavirus	*Human papillomavirus 61*	*Alphapapillomavirus 3*
Alphapapillomavirus	*Human papillomavirus 2*	*Alphapapillomavirus 4*
Alphapapillomavirus	*Human papillomavirus 26*	*Alphapapillomavirus 5*
Alphapapillomavirus	*Human papillomavirus 53*	*Alphapapillomavirus 6*
Alphapapillomavirus	*Human papillomavirus 18*	*Alphapapillomavirus 7*
Alphapapillomavirus	*Human papillomavirus 7*	*Alphapapillomavirus 8*
Alphapapillomavirus	*Human papillomavirus 16*	*Alphapapillomavirus 9*
Alphapapillomavirus	*Human papillomavirus 6*	*Alphapapillomavirus 10*
Alphapapillomavirus	*Human papillomavirus 34*	*Alphapapillomavirus 11*
Alphapapillomavirus	*Rhesus monkey papillomavirus 1*	*Alphapapillomavirus 12*
Alphapapillomavirus	*Human papillomavirus 54*	*Alphapapillomavirus 13*
Alphapapillomavirus	*Human papillomavirus cand90*	*Alphapapillomavirus 14*
Alphapapillomavirus	*Human papillomavirus 71*	[Deleted]
Betapapillomavirus	**Human papillomavirus 5**	**Betapapillomavirus 1**
Betapapillomavirus	*Human papillomavirus 9*	*Betapapillomavirus 2*
Betapapillomavirus	*Human papillomavirus 49*	*Betapapillomavirus 3*
Betapapillomavirus	*Human papillomavirus cand92*	*Betapapillomavirus 4*
Betapapillomavirus	*Human papillomavirus cand96*	*Betapapillomavirus 5*
Betapapillomavirus		*Betapapillomavirus 6*

Gammapapillomavirus	**Human papillomavirus 4**	**Gammapapillomavirus 1**
Gammapapillomavirus	*Human papillomavirus 48*	*Gammapapillomavirus 2*
Gammapapillomavirus	*Human papillomavirus 50*	*Gammapapillomavirus 3*
Gammapapillomavirus	*Human papillomavirus 60*	*Gammapapillomavirus 4*
Gammapapillomavirus	*Human papillomavirus 88*	*Gammapapillomavirus 5*
Gammapapillomavirus		*Gammapapillomavirus 6*
Gammapapillomavirus		*Gammapapillomavirus 7*
Gammapapillomavirus		*Gammapapillomavirus 8*
Gammapapillomavirus		*Gammapapillomavirus 9*
Gammapapillomavirus		*Gammapapillomavirus 10*
Deltapapillomavirus	**European elk papillomavirus**	**Deltapapillomavirus 1**
Deltapapillomavirus	*Deer papillomavirus*	*Deltapapillomavirus 2*
Deltapapillomavirus	*Ovine papillomavirus 1*	*Deltapapillomavirus 3*
Deltapapillomavirus	*Bovine papillomavirus 1*	*Deltapapillomavirus 4*
Deltapapillomavirus		*Deltapapillomavirus 5*
Epsilonpapillomavirus	**Bovine papillomavirus 5**	**Epsilonpapillomavirus 1**
Zetapapillomavirus	**Equine papillomavirus 1**	**Zetapapillomavirus 1**
Etapapillomavirus	**Fringilla coelebs papillomavirus**	**Etapapillomavirus 1**
Thetapapillomavirus	**Psittacus erithacus timneh papillomavirus**	**Thetapapillomavirus 1**
Iotapapillomavirus	**Mastomys natalensis papillomavirus**	**Iotapapillomavirus 1**
Kappapapillomavirus	*Rabbit oral papillomavirus*	*Kappapapillomavirus 1*
Kappapapillomavirus	**Cottontail rabbit papillomavirus**	**Kappapapillomavirus 2**
Lambdapapillomavirus	*Feline papillomavirus*	*Lambdapapillomavirus 1*
Lambdapapillomavirus	**Canine oral papillomavirus**	**Lambdapapillomavirus 2**
Lambdapapillomavirus		*Lambdapapillomavirus 3*
Lambdapapillomavirus		*Lambdapapillomavirus 4*
Mupapillomavirus	**Human papillomavirus 1**	**Mupapillomavirus 1**
Mupapillomavirus	*Human papillomavirus 63*	*Mupapillomavirus 2*
Nupapillomavirus	**Human papillomavirus 41**	**Nupapillomavirus 1**
Xipapillomavirus	**Bovine papillomavirus 3**	**Xipapillomavirus 1**
Omikronpapillomavirus	**Phocoena spinipinnis papillomavirus**	**Omikronpapillomavirus 1**
Pipapillomavirus	**Hamster oral papillomavirus**	**Pipapillomavirus 1**
Pipapillomavirus		*Pipapillomavirus 2*
Rhopapillomavirus		**Rhopapillomavirus 1**
Sigmapapillomavirus		**Sigmapapillomavirus 1**
Taupapillomavirus		**Taupapillomavirus 1**
Upsilonpapillomavirus		**Upsilonpapillomavirus 1**
Upsilonpapillomavirus		*Upsilonpapillomavirus 2*
Phipapillomavirus		**Phipapillomavirus 1**
Chipapillomavirus		**Chipapillomavirus 1**
Chipapillomavirus		*Chipapillomavirus 2*
Psipapillomavirus		**Psipapillomavirus 1**
Omegapapillomavirus		**Omegapapillomavirus 1**
Dyodeltapapillomavirus		**Dyodeltapapillomavirus 1**
Dyoepsilonpapillomavirus		**Dyoepsilonpapillomavirus 1**
Dyozetapapillomavirus		**Dyozetapapillomavirus 1**
Dyoetapapillomavirus		**Dyoetapapillomavirus 1**
Dyothetapapillomavirus		**Dyothetapapillomavirus 1**
Dyoiotapapillomavirus		**Dyoiotapapillomavirus 1**

additional material in support of this proposal

References:

Bernard, H.U., Burk, R.D., Chen, Z., van Doorslaer, K., Hausen, H. & de Villiers, E.M. (2010). Classification of papillomaviruses (PVs) based on 189 PV types and proposal of taxonomic amendments. Virology 401, 70-79.

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.

In order to understand these proposals, it is essential to refer to Bernard *et al.* (2010). In this publication, the Study Group proposed a significant expansion of the family *Papillomaviridae*. To achieve this, the names of genera were extended to the end of the Greek alphabet (*Alphapapillomavirus* through *Omegapapillomavirus*), followed by recommencement with a *Dyo*-prefix from *Dyodeltapapillomavirus* onwards to avoid confusion with the most populous genera, *Alphapapillomavirus* through *Gammapapillomavirus*.

Papillomavirus taxa are defined on the basis of phylogenetic distances among the L1 DNA sequences. A phylogenetic tree is shown in Bernard *et al.* (2010). The criteria for defining species and genera are general and not absolute, with sequence identity ranges overlapping somewhat. Thus, intergeneric identities range from about 43-62%, interspecies identities from about 55-71%, and intraspecies identities from about 67-88%. The proposals are in line with this criterion.