Taxonomic proposal to the ICTV Executive Committee



This form should be used for all taxonomic proposals. Please complete all those modules that are applicable (and then delete the unwanted sections).

Code(s) assigned:	2008.018- 22V	(to be completed by ICTV officers)			
Short title: 2 species in new genus Batrachovirus (e.g. 6 new species in the genus Zetavirus; re-classification of the family Zetaviridae etc.) Modules attached (please check all that apply): The control of the family Zetaviridae etc.) The control of the family Zetaviridae etc.) The control of the family Zetaviridae etc.) The control of the family Zetaviridae etc.)					
Author(s) with e-mail address(es) of the proposer:					
Herpesvirales Study Group; P. Pellett, Chair; ppellett@med.wayne.edu					
ICTV-EC or Study Group comments and response of the proposer:					

MODULE 4: NEW GENUS

Ranid herpesvirus 1 Ranid herpesvirus 2

(if more than one genus is to be created, please complete additional copies of this section)

Code	200	08.018V	(assigned by IC	CTV officers)
To crea	te a ne	ew genus assigned as foll	lows:	
Subfa	amily:			Fill in all that apply. Ideally, a genus
Fa	Family: Alloherpesviridae			should be placed within a higher taxon but if not put "unassigned" here.
(Order:	Herpesvirales		
Code	200)8.019V	(assigned by ICTV officers)	
To nam	e the r	new genus: <i>Batrachoviru</i>	.s	
Code	200	08.020V	(assigned by ICTV officers)	
You may	list sev	following as species in the veral species here. For each ecies is new, please complete.	n species, please	state whether it is new or existing.

Code	2008.021V	(assigned by ICTV officers)		
Note: every genus must have a type species				
To designate the following as the type species in the new genus:				
Ranid herpesvirus 1				

If the species already exists, please state whether it is unassigned or is to be removed from another genus and, if the latter, complete module 6(a) to 'REMOVE' it from that genus.

Argument to justify the creation of a new genus:

Ranid herpesvirus 1 is commonly known as Lucké tumor herpesvirus. Ranid herpesvirus 2 is commonly known as frog virus 4 and has no known pathology. Ranid herpesvirus 1 has not been grown in cell culture, whereas ranid herpesvirus 2 has. Both viruses infect the leopard frog, and they are biologically distinct. They are unassigned in the family.

Complete genome sequence data show the two viruses are distinct from each other and are more closely related to each other than to other herpesviruses. Ranid herpesvirus 1 has 132 genes and ranid herpesvirus 2 has 147 genes. They share 40 homologous genes with each other, 19 of which have homologues in ictalurid herpesvirus 1 (in the genus *Ictalurivirus*).

Origin of the new genus name:

Batrachos, frog

Argument to justify the choice of type species:

Argument to justify the choice of type species:

Ranid herpesvirus 1 was the first to be described, as the causative agent of the Lucké tumor. It was much worked on in its day. Ranid herpesvirus 2 can be cultured *in vitro*, but causes no known disease. Very little work has been done with it.

Species demarcation criteria in the 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.

Related herpesviruses are classified as distinct species if (a) their nucleotide sequences differ in a readily assayable and distinctive manner across the entire genome and (b) they occupy different ecological niches by virtue of their distinct epidemiology and pathogenesis or their distinct natural hosts. A paradigm is provided by HHV-1 and HHV-2, which differ in their sequence throughout the genome, tend to infect different epithelial surfaces and exhibit distinct epidemiological characteristics. These two viruses recombine readily in culture, but despite the fact that they can infect the same sites in the host, no recombinants have been isolated in nature, and the two viruses appear to have evolved independently for millions of years.

The two viruses appear to meet these criteria.

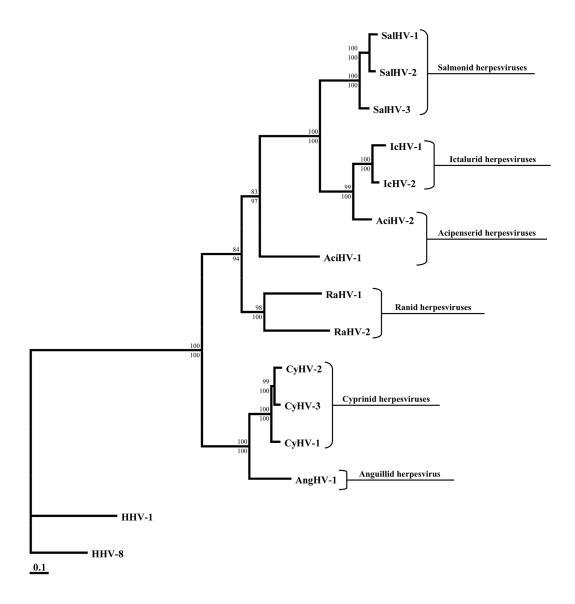
References:

Davison AJ, Cunningham C, Sauerbier W, McKinnell RG. 2006. Genome sequences of two frog herpesviruses. J Gen Virol 87:3509-14. Accessions: ranid herpesvirus 1, DQ665917; ranid herpesvirus 2, DQ665652.

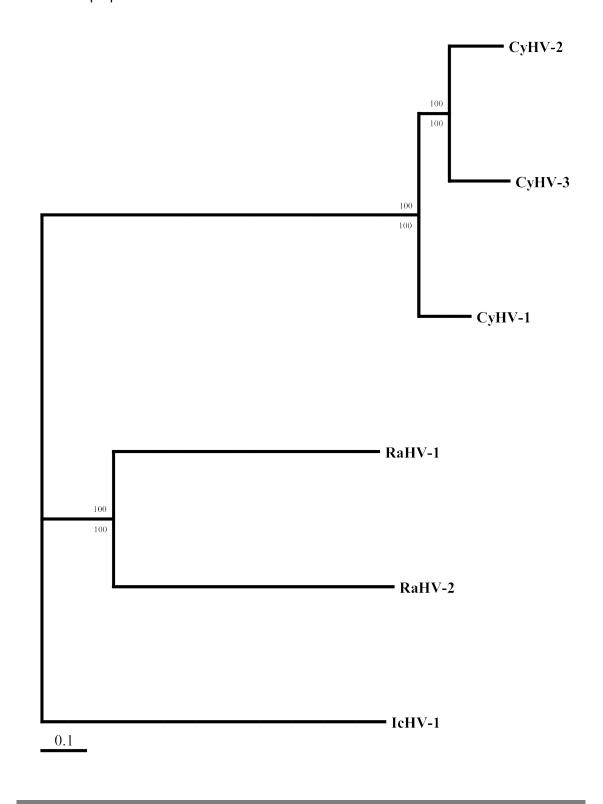
Annexes:

Include as much information as necessary to support the proposal. The use of Figures and Tables is strongly recommended.

Phylogram depicting relationships among fish and amphibian herpesviruses, based on the concatenated partial deduced amino acid sequences of the DNA polymerase and terminase genes. The quartet puzzling maximum likelihood tree was rooted with human herpesviruses 1 and 8 (HHV-1 and HHV-8) in the family *Herpesviridae*. The numbers above each node represent quartet puzzling probabilities (values >70 shown) of the maximum likelihood analysis, and the numbers below represent posterior probabilities (values >90 shown) of the Bayesian analysis. The branch lengths are based on the number of inferred substitutions, as indicated by the scale. TB Waltzek, unpublished.



Phylogram depicting relationships among fish and amphibian herpesviruses, based on the concatenated deduced amino acid sequences of the full length terminase, helicase and triplex protein genes, plus the partial DNA polymerase gene. The tree is not rooted. The first number in each pair represents the quartet puzzling probability (values >70 shown) of the maximum likelihood analysis and the second number represents the posterior probability (values >90 shown) of the Bayesian analysis. The branch lengths are based on the number of inferred substitutions, as indicated by the scale. TB Waltzek, unpublished.



MODULE 5: **NEW SPECIES**

Code	200	08.022V	(assigned by ICTV officers)		
To crea	ite 2 ne	w species assigned as	follows:	Fill in all that apply Ideally appairs	
(Genus:	Batrachovirus		Fill in all that apply. Ideally, species should be placed within a genus, but	it is
	amily:	Bunucitovitus		acceptable to propose a species that	is
	amily:	Alloherpesviridae		within a Subfamily or Family but not assigned to an existing genus (in wh	ich
(Order: Herpesvirales			case put "unassigned" in the genus box)	
If the sp	ent to j	ustify the creation of	isting genus, list th	e criteria for species demarcation and	
See mo	dule 4 a	ibove.			
Referei	ices:				
Annexe Include a strongly	as much		y to support the pro	pposal. The use of Figures and Tables is	