

Template for Taxonomic Proposal to the ICTV Executive Committee Creating Species in an existing genus

Code[†] **2003.213V.01** To designate the following viruses as species in the genus:

Erythrovirus

belonging to the family[°] : ***Parvoviridae***

Simian parvovirus (cynomolgus) (SPV)
Rhesus macaque parvovirus (RmPV)
Pig-tailed macaque parvovirus (PmPV)

Code[†] **2003.214V.01** To designate the following viruses as tentative species in the genus:

Chipmunk parvovirus (ChPV)
Bovine parvovirus type 3 (BPV-3)

[†] Assigned by ICTV officers

[°] leave blank if inappropriate or in the case of an unassigned genus

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New Taxonomic Order

Order

Family *Parvoviridae*

Subfamily *Parvovirinae*

Genus *Erythrovirus*

Type Species *Human parvovirus B19*

List of Species in the genus *Human parvovirus B19*

Simian parvovirus (cynomolgus) (SPV)

Rhesus macaque parvovirus (RmPV)

Pig-tailed macaque parvovirus (PmPV)

List of Tentative Species in the Genus

Chipmunk parvovirus (ChPV)

Bovine parvovirus type 3 (BPV-3)

Argumentation to justify the designation of new species in the genus

Species demarcation criteria in the genus

Criteria used to distinguish among species include DNA sequence relatedness, biological host range and differences in structural protein antigenicity. In general, isolates within a species differ by less than 5% in nucleotide sequence for the major non-structural protein, whereas isolates from species within a genus differ by >10% to 50%. In general, members of an individual species are confined to a single natural host species, but this is not invariant, as strains may exist within a viral species that infect different species of host animal. Strains within a species efficiently cross-neutralize, whereas isolates from individual species are serologically distinct from those of other species.

Argumentation to justify the designation of new species in the genus

The NS1 (shown) and VP1 trees both strongly support the changes. NS1 DNA sequences of PmPV, RmPV, SPV, ChPV and BPV-3 differ from B19 (type species) and one another in by between 39 and 88%, yet they cluster on the same branch in the tree. The SG is not in full agreement about requesting Species Designation for ChPV or BPV-3 at this time, as they are more distantly related to the type species than are the three monkey viruses.

List of created Species in the genus

Simian parvovirus (cynomolgus) (SPV)
Rhesus macaque parvovirus (RmPV)
Pig-tailed macaque parvovirus (PmPV)

List of created Tentative Species in the genus

Chipmunk parvovirus (ChPV)
Bovine parvovirus type 3 (BPV-3)

References

- Brown KE, Green SW, O'Sullivan MG, Young NS. (1995) Cloning and sequencing of the simian parvovirus genome. *Virology*, **210**, 314-22.
- Yoo BC, Lee DH, Park SM, Park JW, Kim CY, Lee HS, Seo JS, Park KJ, Ryu WS. (1999) A novel parvovirus isolated from Manchurian chipmunks. *Virology*, **253**, 250-8.
- Green, S.W., Malkovska, I., O'Sullivan, M.G. and Brown, K.E. (2000). Rhesus and pig-tailed macaque parvoviruses: identification of two new members of the erythrovirus genus in monkeys. *Virology*, **269**, 105-12.

Parvovirinae
non-structural genes

