

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

Code<sup>†</sup>  To designate the following as species in the genus:

*Trichovirus*

belonging to the family<sup>°</sup> : *Flexiviridae*

*Apricot pseudo-chlorotic leaf spot virus*  
Apricot pseudo-chlorotic leaf spot virus-Sus2 (APCLSV-Sus2  
AY713379

<sup>†</sup> Assigned by ICTV officers

<sup>°</sup> leave blank if inappropriate or in the case of an unassigned genus

## Author(s) with email address(es) of the Taxonomic Proposal

Mike Adams	mike.adams@bbsrc.ac.uk
Thierry Candresse	tc@bordeaux.inra.fr
Jiong Chen	jchen1@mail.hz.zj.cn
Renate Koenig	r.koenig@bba.de
Giovanni Martelli	martelli@agr.uniba.it
K. H. Ryu	ryu@swu.ac.kr
Sergei Zavriev	zavriev@iab.ac.ru

## Old Taxonomic Order

Order  
Family *Flexiviridae*  
Genus *Trichovirus*  
Type Species  
Species in the Genus  
Tentative Species in the Genus  
Unassigned Species in the family

## New Taxonomic Order

Order  
Family *Flexiviridae*  
Genus *Trichovirus*  
Type Species  
Species in the Genus *Apricot pseudo-chlorotic leaf spot virus*  
Tentative Species in the Genus  
Unassigned Species in the family

## ICTV-EC comments and response of the SG

## Species demarcation criteria in the genus

The criteria demarcating species in the genus are:

- Natural and experimental host range,
- Serological specificity,
- Less than *ca.* 72% identical nt or 80% identical aa between the CP or polymerase genes,
- Transmission by a vector,
- Vector specificity.

## Argumentation to justify the designation of new species in the genus

A trichovirus was detected in symptomatic apricot and Japanese plum from Italy. The Sus2 isolate of this agent cross-reacted with polyclonal antibodies to the trichovirus type member, *Apple chlorotic leaf spot virus* (ACLSV), but was not detected by broad-specificity anti-ACLSV monoclonal antibodies. It had particles with typical trichovirus morphology but, contrary to ACLSV, was unable to infect *Chenopodium quinoa* and *C. amaranticolor*. The virtually complete sequence of its genome (AY713379: 7,494 nt, missing *ca.* 30-40 nt of the 5' terminal sequence) and the partial sequence of another isolate (AY713380) were determined. The new virus has a genomic organization similar to that of ACLSV but only *ca.* 65-67% nucleotide identity with sequenced isolates of ACLSV. The differences in serology, host range, genome sequence, and phylogenetic reconstructions for all viral proteins (Annex 1) support the idea that this agent should be considered a new species. Further details are provided by Liberti et al., (2005) on which this justification is based.

## List of created Species in the genus

*Apricot pseudo-chlorotic leaf spot virus*

## References

Liberti D, Marais A, Svanella-Dumas L, Dulucq MJ, Alioto D, Ragozzino A, Rodoni B, Candresse T (2005). Characterization of Apricot pseudo-chlorotic leaf spot virus, a novel trichovirus isolated from stone fruit trees. *Phytopathology* 95: 420-426.

**Annexes: Fig. 1**

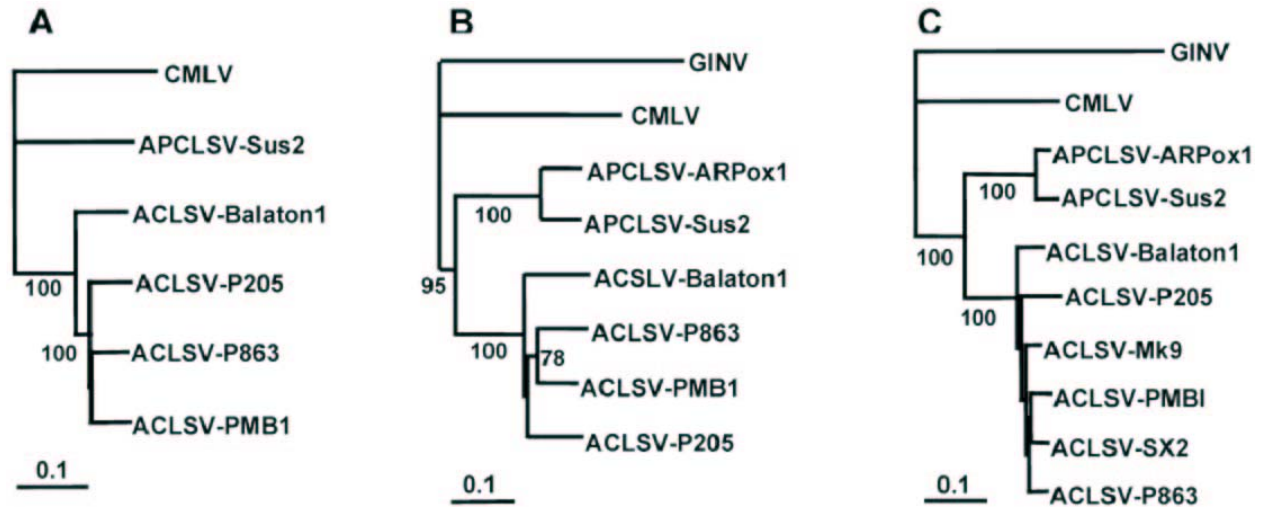


Fig. 1. Phylogenetic trees reconstructed for the A, replication protein, B, movement protein, and C, coat protein amino acid sequences of known trichoviruses. Trees were constructed using the neighbor-joining method with 1,000 bootstrap replicates. Only bootstrap values above 70% are shown. The bar represents 0.1 substitutions per site. The following sequences were used: Apricot pseudo-chlorotic leaf spot virus (APCLSV) (Sus2: AY713379; ARPox1: AY713380); *Apple chlorotic leaf spot virus* (ACSLV) (P863: M58152; P205: D14996; PMB1: AJ243438; Balaton1: X99752; SX2: AF251275; MK9: AB060962); *Cherry mottle leaf virus* (CMLV, AF170028); and *Grapevine berry inner necrosis virus* (GINV, D88448). This is Fig.3 in Liberti et al., 2005.