

Taxonomic Proposal to the ICTV Executive Committee

Removing species in an existing genus

Code[†] **2007.125P.04** To remove the following as species in the genus:

Tombusvirus

belonging to the family[°] :

Tombusviridae

Pear latent virus

[†] Assigned by ICTV officers

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

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

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Old Taxonomic Order

Order

Family *Tombusviridae*

Genus *Tombusvirus*

Type Species *Tomato bushy stunt virus*

Species in the Genus: (16 species)

New Taxonomic Order

Order

Family *Tombusviridae*

Genus *Tombusvirus*

Type Species *Tomato bushy stunt virus*

Species in the Genus: (17 species)

2 new species (see separate proposal) and 1 current species to be removed

ICTV-EC comments and response of the SG

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Species demarcation criteria in the genus

- Extent of serological relationship as determined by immunodiffusion usually not below 3, and/or ELISA,
- Extent of sequence identity between relevant gene products:
 - Less than 87% aa sequence identity of the CP,
 - Less than 96% aa sequence identity of the polymerase,
- Size of the CP,
- Differential cytopathological features; organelles from which multivesicular bodies arise,
- Natural host range,
- Artificial host range reactions.

Argumentation to justify the removal of a species in the genus

Characterisation of Pear latent virus and its complete sequence (AY100482) were published by Russo et al., (2002). Eggplant mottled crinkle virus (EMCV) has been recognized for longer as a species in the genus *Tombusvirus* but sequence data have only become available more recently. The sequence of the first 312aa of the polymerase of EMCV (DQ090837) is identical to that of PeLV while the coat protein (AY500890) differs in only one amino acid residue from that of PeLV. These viruses are clearly conspecific and, based on priority, it is suggested that the name *Eggplant mottled crinkle virus* should be retained for the species.

It should also be noted that a sequence (DQ011234) labeled Lisianthus necrosis virus (LNV, listed as a tentative member of the genus *Necrovirus* in the ICTV 8th report) is also clearly from the same species. The sequences of LNV and EMCV have 97% identical amino acids in the joined pol-cp-mp sequence (1397aa – effectively the entire coding sequence).

List of created removed from the genus

Pear latent virus

Revised species

Eggplant mottled crinkle virus

Eggplant mottled crinkle virus	(EMCV)	DQ090837 (polymerase) AY500890 (coat protein)
Pear latent virus	(PeLV)	AY100482 (complete)
Lisianthus necrosis virus	(LNV)	DQ011234 (complete)

References

Koenig R., Verhoeven J.T., Fribourg C.E., Pfeilstetter E., Lesemann D.E. (2004). Evaluation of various species demarcation criteria in attempts to classify ten new tombusvirus isolates. Arch. Virol. 149:1733-1744.

Russo M., Vovlas C., Rubino L., Grieco F., Martelli G.P. (2002). Molecular characterization of a tombusvirus isolated from diseased pear trees in southern Italy. J. Plant Pathol. 84:161-166.

Annex: none