

Fast track proposals from the *Potyviridae* SG

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Creating Unassigned species in the family

FT2003.016P.01. To designate *Tomato mild mottle virus* as a new unassigned species in the *Potyviridae* family represented by one isolate; Tomato mild mottle virus (TomMMoV).

Justification: This virus is clearly distinct from its nearest relatives, viruses in the genus *Ipomovirus*. On the basis of coat protein amino acid sequence, which is the primary sequence used for *Potyviridae* phylogenetics, it is significantly different from its nearest relative (CVYV). The coat protein amino acid sequences of TomMMoV and CVYV are only 36% identical, well beyond the range found for members of the same genus in the *Potyviridae*. Furthermore, Ipmoviruses are transmitted by the whitefly *Bemisia tabaci*, and TomMMoV is transmitted by aphids in a nonpersistent manner.

Reference: Monger, W.A., Spence, N.J., and Foster, G.D. (2002) Molecular evidence that the aphid-transmitted *Tomato mild mottle virus* belongs to the *Potyviridae* family but not the *Potyvirus* genus. *Arch. Virol.*, **146**, 2345-2441.

Creating Unassigned species in the family

FT2003.017P.01. To designate *Spartina mottle virus* as a new unassigned species in the *Potyviridae* family represented by one isolate; Spartina mottle virus (SpMoV).

Justification: This virus is clearly distinct from its nearest relatives, viruses in the genus *Rymovirus*. On the basis of coat protein amino acid sequence, which is the primary sequence used for *Potyviridae* phylogenetics, it is significantly different from its nearest relative (RgMV). The coat protein amino acid sequences of SpMoV and RgMV are only 46% identical, well beyond the range found for members of the same genus in the *Potyviridae*. Furthermore, Rymoviruses are transmitted by eriophyid mites, and no such vector has been identified for SpMoV.

Reference: Götz, R., Huth, W., Lesemann, D.-E., and Maiss, E. (2002). Molecular and

serological relationships of *Spartina mottle virus* (SpMV) strains from *Spartina spec.* and from *Cynodon dactylon* to other members of the *Potyviridae*. *Arch. Virol.*, **147**, 379–391.

Creating Unassigned species in the family

FT2003.018P.01. To designate *Sugarcane streak mosaic virus* as a new unassigned species in the *Potyviridae* family represented by one isolate; Sugarcane streak mosaic virus (SCSMV).

Justification: A complete sequence for this virus is not yet available. However, it is distinct from its nearest relatives, the Tritimoviruses. On the basis of coat protein amino acid sequence, which is the primary sequence used for *Potyviridae* phylogenetics, it is basal to the Tritimoviruses, and significantly different from its nearest relative (WSMV). The coat protein amino acid sequences of SCSMV and WSMV are only 47% identical, well beyond the range found for members of the same genus in the *Potyviridae*. Furthermore, Tritimoviruses are transmitted by eriophyid mites, and no such vector has been identified for SCSMV.

References: Hall, J.S., Adams, B., Parsons, T.J., French, R., Lane, L.C., and Jensen, S.G. (1998) Molecular cloning, sequencing, and phylogenetic relationships of a new potyvirus: sugarcane streak mosaic virus, and a reevaluation of the classification of the potyviridae. *Mol Phylogenet Evol.* **10**, 323-332.

Rabenstein F, Seifers DL, Schubert J, French R, Stenger DC. (2002) Phylogenetic relationships, strain diversity and biogeography of tritimoviruses. *J Gen Virol.* **83**, 895-906.

Hema M, Sreenivasulu P, Savithri HS. (2002) Taxonomic position of sugarcane streak mosaic virus in the family Potyviridae. *Arch Virol.* **147**, 1997-2007.

Creating Species in the *Potyvirus* genus

FT2003.019P.01. To designate new species in the *Potyvirus* genus of the *Potyviridae* family:

Carrot virus Y

Carrot virus Y (CtVY)

GenBank Accession no. AF203537

Moran, J., van Rijswijk, B., Traicevski, V., Kitajima, E.W., Mackenzie, A.M. and Gibbs, A.J. (2002) Potyviruses, novel and known, in cultivated and wild species of the family Apiaceae in Australia. *Arch. Virol.* **147**, 1855-1867.

Clitoria virus Y

Clitoria virus Y (ClVY)
GenBank Accession no. AF228515

Cypripedium virus Y

Cypripedium virus Y (CypVY)
GenBank Accession no. AF185954

Diuris virus Y

Diuris virus Y (DiVY)
GenBank Accession no. AF203527
Gibbs, A., Mackenzie, A., Blanchfield, A., Cross, P., Wilson, C.,
Kitajima, E., Nightingale, M. and Clements, M. (2000)
Viruses of orchids in Australia: their identification, biology
and control. *Aust. Orchid Rev.* **65**, 10-21.

Japanese yam mosaic virus

Japanese yam mosaic virus (JYMV)
GenBank Accession no. AB016500
Fuji, S. and Nakamae, H. (1999) Complete nucleotide sequence of
the genomic RNA of a Japanese yam mosaic virus, a new
potyvirus in Japan. *Arch. Virol.* **144**, 231-240.

Lily mottle virus

Lily mottle virus (LMoV)
GenBank Accession no. AB053256

Lycoris mild mottle virus

Lycoris mild mottle virus (LyMMoV)
GenBank Accession no. AF399672

Ornithogalum virus 2

Ornithogalum virus 2 (OV2)
GenBank Accession no. AB079651-6

Ornithogalum virus 3

Ornithogalum virus 3 (OV3)
GenBank Accession no. AB079657-61

Papaya leaf distortion mosaic virus

Papaya leaf distortion mosaic virus (PLDMV)
GenBank Accession no. E12367, E12368
Maoka, T., Kashiwazaki, S., Tsuda, S., Usugi, T. and Hibino, H.
(1996) Nucleotide sequence of the capsid protein gene of
papaya leaf-distortion mosaic potyvirus. *Arch. Virol.* **141**,
197-204.

Pepper yellow mosaic virus

Pepper yellow mosaic virus (PepYMV)

GenBank Accession no. AF348610

Inoue-Nagata, A.K., Fonseca, M.E., Resende, R.O., Boiteux, L.S., Monte, D.C., Dusi, A.N., de Avila, A.C. and van der Vlugt, R.A. (2002) Pepper yellow mosaic virus, a new potyvirus in sweetpepper, *Capsicum annum*. *Arch. Virol.* **147**, 849-855.

Pleione virus Y

Pleione virus Y (PIVY)

GenBank Accession no. AF185958

Gibbs, A., Mackenzie A., Blanchfield, A., Cross, P., Wilson, C., Kitajima, E., Nightingale, M. and Clements, M. (2000) Viruses of orchids in Australia: their identification, biology and control. *Aust. Orchid Rev.* **65**, 10-21.

Rhopalanthe virus Y

Rhopalanthe virus Y (RhVY)

GenBank Accession no. AF185956

Gibbs, A., Mackenzie, A., Blanchfield, A., Cross, P., Wilson, C., Kitajima, E., Nightingale, M. and Clements, M. (2000) Viruses of orchids in Australia: their identification, biology and control. *Aust. Orchid Rev.* **65**, 10-21.

Sarcochilus virus Y

Sarcochilus virus Y (SaVY)

GenBank Accession no. AF185957

Gibbs, A., Mackenzie, A., Blanchfield, A., Cross, P., Wilson, C., Kitajima, E., Nightingale, M. and Clements, M. (2000) Viruses of orchids in Australia: their identification, biology and control. *Aust. Orchid Rev.* **65**, 10-21.

Scallion mosaic virus

Scallion mosaic virus (ScMV)

GenBank Accession no. AJ316084

Chen, J., Zheng, H.Y., Chen, J.P. and Adams, M.J. (2002) Characterisation of a potyvirus and a potexvirus from Chinese scallion. *Arch. Virol.* **147**, 683-693.

Sunflower mosaic virus

Sunflower mosaic virus (SuMV)

GenBank Accession no. AF465545

Gulya, T.J., Shiel, P.J., Freeman, T., Jordan, R.L., Isakeit, T. and Berger, P.H. (2002) Host range and characterization of sunflower mosaic virus *Phytopathology* **92**, 694-702.

Sweet potato mild speckling virus (SPMSV)

Sweet potato mild speckling virus

GenBank Accession no. U61228

Alvarez, V., Ducasse, D.A., Biderbost, E. and Nome, S.F. (1997) Sequencing and characterization of the coat protein and 3' non-coding region of a new sweet potato potyvirus. *Arch. Virol.* **142**, 1635-1644.

Zea mosaic virus

Zea mosaic virus (ZeMV)

GenBank Accession no. AF228693

Seifers, D. L., Salomon, R., Marie-Jeanne, V., Alliot, B., Signoret, P., Haber, S., Loboda, A., Ens, W., She, Y. M. and Standing, K. G. (2000) Characterization of a novel potyvirus isolated from maize in Israel. *Phytopathology* **90**, 505-513.

Justification: sequence difference for the coat protein ORF or the full genome and biological properties.

Creating Synonyms (strains or isolates) in the *Potyvirus* genus

FT2003.020P.01. List as synonym of recognized species in the genus *Potyvirus* of the family *Potyviridae*, the following viruses:

Alstromeria mosaic virus

(Alstroemeria streak virus)

(AIMV-AIStV)

Leek yellow stripe virus

(Garlic mosaic virus)

(LYSV-GMV)

GenBank Accession nos. AF500074, E03282-3

(Pterostylis virus Y)

(LYSV-PtVY)

GenBank Accession nos. AF185964-5

Chili veinal mottle virus

(Indian pepper mottle virus)

(ChiVMV-IPMoV)

(Pepper vein banding virus)

(ChiVMV-PVBV)

GenBank Accession nos. AJ237843

Joseph, J. and Savithri H.S. (1999) Determination of 3'-terminal nucleotide sequence of pepper inverted question mark break vein banding virus RNA and expression of its coat protein in *Escherichia coli*. *Arch. Virol.* **144**, 1679-1687.

Zea mosaic virus

(Iranian johnsongrass mosaic virus)

(ZeMV-IJGMV)

Columbian datura virus

(Petunia flower mottle virus)

(CDV-PetFMV)

GenBank Accession no. AF030689

mistake in 7th report
(synonym to LYSV)
Ornithogalum mosaic virus
Pterostylis virus Y (OrMV-PtVY)
GenBank Accession nos. AF185964-5

Potato virus A
(Tamarillo mosaic virus) (PVA-TamMV)
GenBank Accession nos. AJ131403, X54804

Sunflower chlorotic mottle virus
(synonym to PVY)
GenBank Accession no. AF255677

Lily mottle virus
Tulip band breaking virus (LMoV-TBBV)
GenBank Accession nos. AB078007, S60805

Justification: sequence identity for the coat protein ORF, or partial CP sequence, or biological properties.

Down grading species in the *Potyvirus* genus

FT2003.021P.01. Move from the status of species to tentative species, in the genus *Potyvirus* of the family *Potyviridae*, the following viruses:

Rembrandt tulip breaking virus (ReTBV)

Justification: lack of data; S60808 is only a partial CP sequence.

Removing tentative species in the *Potyvirus* genus

FT2003.022P.01. Remove from the list of tentative species Nerine virus (NV), in the genus *Potyvirus* of the family *Potyviridae*.

Justification: mistake in the VIIth Report

Creating tentative species in the *Potyvirus* genus

FT2003.023P.01. Add to the list of tentative species in the genus *Potyvirus*, of the family *Potyviridae*, the following viruses:

Chrysanthemum spot virus (ChSV)

Dioscorea dumentorum virus (DDV)

Partial CP sequences, AJ305432, AJ305433

Melothria mottle virus (MeMoV)

Peanut top paralysis virus (PeTPV)

Peanut chlorotic blotch virus (PeCBV)

Partial CP sequence, AF001624

Justification: lack of data to classify them as species.

Genus *Ipomovirus*

Creating species in the *Ipomovirus* genus

FT2003.024P.01. To designate new species in the *Ipomovirus* genus of the *Potyviridae* family:
Cassava brown streak virus
Cassava brown streak virus (CBSV)
GenBank Accession no. AY007597, AY008440-2, AF311052-3
Monger, W. A., Seal, S., Isaac, A. M. & Foster, G. D. (2001).
Molecular characterization of the Cassava brown streak virus coat protein. *Plant Pathol.* **50**, 527-534.

Cucumber vein yellowing virus
Cucumber vein yellowing virus (CVYV)
GenBank Accession no. AF233429 AJ301640.

Lecoq, H., Desbiez, C., Delecalle, B., Cohen, S. and Mansour, A. (2000) Cytological and molecular evidence that the whitefly-transmitted cucumber vein yellowing virus is a tentative member of the family *Potyviridae*. *J. Gen. Virol.* **81**, 2289-2293.

Justification: sequence difference for the coat protein ORF or the full genome and biological properties.

Genus *Macluravirus*

Creating species in the *Macluravirus* genus

FT2003.026P.01. To remove from the genus *Potyvirus*, family *Potyviridae*, the species *Cardamon mosaic virus* (Cardamon mosaic virus, CdMV) and designate *Cardamon mosaic virus* (Cardamon mosaic virus, CdMV) as a new species in the *Macluravirus* genus of the *Potyviridae* family:

Justification: sequence difference for the coat protein ORF and biological properties. GenBank Accession nos. AF189125, AJ345002.

Jacob, T. & Usha, R. (2001). 3'-Terminal sequence analysis of the RNA genome of the Indian isolate of cardamom mosaic virus: a new member of genus *Macluravirus* of *Potyviridae*. *Virus Genes* **23**, 81-88.

Creating synonym in the *Macluravirus* genus

FT2003.027P.01. List as synonym of recognized species in the genus *Macluravirus* of the family *Potyviridae*, the following viruses:
Indian cardamon mosaic virus
(synonym to CdMV))

Justification: sequence identity for the coat protein ORF. GenBank Accession nos. AJ308472-7

Creating tentative species in the *Macluravirus* genus

FT2003.028P.01. To designate new tentative species in the *Macluravirus* genus of the *Potyviridae* family:
Chinese yam necrotic mosaic virus (CYNMV)

Justification: lack of data. GenBank Accession no. AB044386 .

Kondo, T. (2001). The 3'-terminal sequence of Chinese yam necrotic mosaic virus genomic RNA: a close relationship with macluravirus. *Archives of Virology* **146**, 1527-1535.

Genera *Rymovirus*/*Tritimovirus*

Creating species in the *Tritimovirus* genus

FT2003.029P.01. To remove the species *Oat necrotic mottle virus* (Oat necrotic mottle virus, ONMV), from the *Rymovirus* genus of the family *Potyviridae*, and to designate *Oat necrotic mottle virus* (Oat necrotic mottle virus, ONMV), as a species in the genus *Tritimovirus* of the family *Potyviridae*.

Justification: sequence difference for the coat protein ORF and biological properties. GenBank Accession no. AF454460

Rabenstein F, Seifers DL, Schubert J, French R, Stenger DC. (2002)
Phylogenetic relationships, strain diversity and biogeography of tritimoviruses. *J Gen Virol.* **83**, 895-906.