



This form should be used for all taxonomic proposals. Please complete all those modules that are applicable (and then delete the unwanted sections). For guidance, see the notes written in blue and the separate document "Help with completing a taxonomic proposal"

Please try to keep related proposals within a single document; you can copy the modules to create more than one genus within a new family, for example.

MODULE 1: **TITLE, AUTHORS, etc**

Code assigned:	<i>2010.010aP</i>	(to be completed by ICTV officers)
Short title: 1 new species in the genus Pospiviroid (e.g. 6 new species in the genus <i>Zetavirus</i>)		
Modules attached (modules 1 and 9 are required)	1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input checked="" type="checkbox"/>	

Author(s) with e-mail address(es) of the proposer:

Ricardo Flores (rflores@ibmcp.upv.es) and J.Th.J. Verhoeven (j.th.j.verhoeven@minlnv.nl)

List the ICTV study group(s) that have seen this proposal:

A list of study groups and contacts is provided at <http://www.ictvonline.org/subcommittees.asp> . If in doubt, contact the appropriate subcommittee chair (fungal, invertebrate, plant, prokaryote or vertebrate viruses)

Viroids

ICTV-EC or Study Group comments and response of the proposer:

Date first submitted to ICTV:

Date of this revision (if different to above):

MODULE 2: **NEW SPECIES**

creating and naming one or more new species.

If more than one, they should be a group of related species belonging to the same genus. All new species must be placed in a higher taxon. This is usually a genus although it is also permissible for species to be “unassigned” within a subfamily or family. Wherever possible, provide sequence accession number(s) for one isolate of each new species proposed.

Code	2010.010aP	(assigned by ICTV officers)
To create 1 new species within:		
Genus:	<i>Pospiviroid</i>	Fill in all that apply. <ul style="list-style-type: none"> • If the higher taxon has yet to be created (in a later module, below) write “(new)” after its proposed name. • If no genus is specified, enter “unassigned” in the genus box.
Subfamily:		
Family:	<i>Pospiviroidae</i>	
Order:		
And name the new species:		GenBank sequence accession number(s) of reference isolate:
<i>Pepper chat fruit viroid</i>		FJ409044

Reasons to justify the creation and assignment of the new species:

- Explain how the proposed species differ(s) from all existing species.
 - If species demarcation criteria (see module 3) have previously been defined for the genus, **explain how the new species meet these criteria.**
 - If criteria for demarcating species need to be defined (because there will now be more than one species in the genus), please state the proposed criteria.
- Further material in support of this proposal may be presented in the Appendix, Module 9

In autumn 2006, a new disease was observed in a glasshouse-grown crop of sweet pepper (*Capsicum annuum* L.) in the Netherlands. Fruit size of the infected plants was reduced up to 50%, and plant growth was also slightly reduced. The disease is caused by a previously non-described viroid, which is transmitted by both mechanical inoculation and pepper seeds. When inoculated experimentally, it infects several solanaceous plant species inducing vein necrosis and reduced fruit and tuber size in tomato and potato, respectively. In PCFVd-inoculated tomato, young leaves showed necrotic spots and streaks along the veins and on the petioles 2–3 weeks after inoculation.

The viroid genome consists of 348 nucleotides (59.2% G+C) and, with minor modifications, it has the central conserved and the terminal conserved regions characteristic of members of the genus *Pospiviroid*. Classification of the pepper viroid within the genus *Pospiviroid* is further supported by the presence and structure of hairpins I and II, the presence of internal and external RY motifs, and phylogenetic analyses. The primary structure of the pepper viroid only showed a maximum of 66% nucleotide sequence identity with other viroids, which is far below the main species demarcation limit of 90%.

According to its biological and molecular properties, properties, we propose to assign the pepper viroid to a new species within the genus *Pospiviroid*, and to name this new species *Pepper chat fruit viroid* (PCFVd) after its most conspicuous symptoms. Koch’s postulates have been fulfilled for the new pepper viroid.

MODULE 9: **APPENDIX**: supporting material

additional material in support of this proposal

References:

VERHOEVEN, J.TH.J., JANSEN, C.C.C., ROENHORST, J.W., FLORES, R. & DE LA PEÑA, M. 2009. Pepper chat fruit viroid: biological and molecular properties of a proposed new species of the genus Pospiviroid. *Virus Research* 144, 209-214.

Annex:

Include as much information as necessary to support the proposal, including diagrams comparing the old and new taxonomic orders. The use of Figures and Tables is strongly recommended but direct pasting of content from publications will require permission from the copyright holder together with appropriate acknowledgement as this proposal will be placed on a public web site. For phylogenetic analysis, try to provide a tree where branch length is related to genetic distance.

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LOCUS      FJ409044                348 bp    RNA      circular VRL 19-NOV-2008
DEFINITION Pepper chat fruit viroid, complete genome.
ACCESSION  FJ409044
VERSION   FJ409044.1  GI:212726127
KEYWORDS   .
SOURCE     Pepper chat fruit viroid
  ORGANISM Pepper chat fruit viroid
            Viroids; Pospiviroidae; Pospiviroid; unclassified Pospiviroid.
REFERENCE  1  (bases 1 to 348)
  AUTHORS  Verhoeven,J.T.J., Jansen,C.C.C., Roenhorst,J.W., Flores,R. and de
            la Pena,M.
  TITLE    Pepper chat fruit viroid: biological and molecular properties of a
            proposed new species of the genus Pospiviroid
  JOURNAL  Unpublished
REFERENCE  2  (bases 1 to 348)
  AUTHORS  Jansen,C.C.C.
  TITLE    Direct Submission
  JOURNAL  Submitted (22-OCT-2008) Molecular Biology, Plant Protection
            Service, PO Box 9102, Wageningen 6700HC, The Netherlands
FEATURES   Location/Qualifiers
  source   1..348
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            /host="Capsicum annuum"
            /db_xref="taxon:574040"
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241 tctgttcgga gactaccggt tggatacaac tgacagaggt gctttttctt ccaccctgct
301 tctaccgacg cggccgggag tgaagctacc cgggaccgga gaggatct
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