



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"

<b>Code assigned:</b>	<b>2007.006-009P</b>	(to be completed by ICTV officers)
<b>Short title:</b> New genus <i>Mycoflexivirus</i> for <i>Botrytis virus F</i>		
<b>Modules attached</b> (please check all that apply):	1 <input type="checkbox"/>	2 <input checked="" type="checkbox"/>
	6 <input type="checkbox"/>	7 <input type="checkbox"/>
	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>
		5 <input type="checkbox"/>

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

Mike Adams (mike.adams@bbsrc.ac.uk) on behalf of the Flexiviridae SG and  
Jan Kreuze (j.kreuze@cgiar.org)

If the proposal has been seen and agreed by the relevant study group(s) write "yes" in the box on the right

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

The original (2007) proposals were to place the new genus within a new subfamily Gammaflexivirinae and to retain the existing families Flexiviridae and Tymoviridae in the new order Tymovirales. As a result of EC discussion and comments, the Study Group has agreed to split the Flexiviridae into three families and thus create an order with four families. Assignment is therefore to the new family Gammaflexiviridae.

Date first submitted to ICTV: 08 June 2007  
Date of this revision (if different to above): 20 Aug 2008

**MODULE 2: NEW SPECIES**

Code	<b>2007.006P</b>	(assigned by ICTV officers)
<b>To create 1 new species with the name(s):</b> <i>Botrytis virus F</i>		

**MODULE 3: NEW GENUS**

Code	<b>2007.007P</b>	(assigned by ICTV officers)
<b>To create a new genus to contain species resembling: <i>Botrytis virus F</i></b>		
Code	<b>2007.008P</b>	(assigned by ICTV officers)
<b>To name the new genus: <i>Mycoflexivirus</i></b>		

Code	<b>2007.009P</b>	(assigned by ICTV officers)
<b>To designate the following as the type species of the genus created in section 3(a):</b>		
<i>Botrytis virus F</i>	Every genus must have a type species; this should be the best characterized species in the genus (not necessarily the first to be discovered)	

**Reasons to justify the creation of a new species and genus:**

Botrytis virus F (BotV-F) is a flexuous rod-shaped mycovirus (Howitt et al., 2001) for which a full sequence has been published (AF238884). It is unusual amongst mycoviruses in having a ssRNA polyadenylated genome and flexuous, filamentous particles; these properties are only currently shared with Botrytis virus X. The ssRNA genome (6827 nt) has two predicted ORFs, the first (and largest) of which encodes an alpha-like replication protein of 212 kDa. Unusually, the ORF1 protein contains an opal putative readthrough codon between the helicase and RdRp regions, a feature not seen in this position in ‘tymo-’ and ‘potex-like’ replicases to which it is otherwise related (see the *Tymovirales* proposal [2007.027-029P.A.Tymovirales] Annex Figure 1). ORF2 (32 kDa) shares amino acid similarity with coat proteins of the current family *Flexiviridae*, particularly *Capillovirus*, *Trichovirus* and *Vitivirus* (see the *Tymovirales* proposal [2007.027-029P.A.Tymovirales] Annex Figure 2). Phylogenetic analysis and particle morphology therefore suggest that BotV-F should be included as a distant member of the current family *Flexiviridae* (which until now has been composed only of plant viruses). As part of the revision of the family and the creation of the order *Tymovirales*, BotV-F is best placed within a separate genus (and family) because of the very different host, the phylogenetic position of the replication protein between those of the current *Flexiviridae* and *Tymoviridae*, and the differences in genome organization and expression. The genus will be placed within the proposed family *Gammapflexiviridae*; see the proposal to create a family *Gammapflexiviridae* [2007.024-026P.A.Gammapflexiviridae]).

**Origin of the new genus name:**

A mycovirus with flexuous particles.

**Reasons to justify the choice of type species:**

It is the only species

**Species demarcation criteria in the new genus:**

Not applicable: only one species

**References:**

Howitt RLJ, Beever RE, Pearson MN, Forster RLS (2001) Genome characterization of Botrytis virus F, a flexuous rod-shaped mycovirus resembling plant ‘potex-like’ viruses. *Journal of General Virology* **82**, 67-78.

Martelli G, Adams MJ, Kreuze JF, Dolja VV (2007) Family *Flexiviridae*: a case study in virion and genome plasticity. *Annual Review of Phytopathology* **45**, 73-100.

**Annex:** Include as much information as necessary to support the proposal. The use of Figures and Tables is strongly recommended.

See the proposals to create a family *Gammapflexiviridae* [2007.024-026P.A.Gammapflexiviridae] and an order *Tymovirales* [2007.027-029P.A.Tymovirales]