



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>2007.014-017P</b>	(to be completed by ICTV officers)
<b>Short title:</b> New genus <i>Botrexvirus</i> for <i>Botrytis virus X</i>		
<b>Modules attached</b> <small>(please check all that apply):</small>	1 <input type="checkbox"/>	2 <input checked="" type="checkbox"/>
	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>
	5 <input type="checkbox"/>	6 <input type="checkbox"/>
	7 <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
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**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 Alphaflexivirinae 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 Alphaflexiviridae.

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>2007.014P</b>	(assigned by ICTV officers)
<b>To create 1 new species with the name(s):</b>		
<i>Botrytis virus X</i>		

MODULE 3: **NEW GENUS**

Code	<b>2007.015P</b>	(assigned by ICTV officers)
<b>To create a new genus to contain species resembling: <i>Botrytis virus X</i></b>		

Code	<b>2007.016P</b>	(assigned by ICTV officers)
<b>To name the new genus: <i>Botrexvirus</i></b>		

Code	<b>2007.017P</b>	(assigned by ICTV officers)
<b>To designate the following as the type species of the genus created in section 3(a):</b>		
<b><i>Botrytis virus X</i></b>	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 X (BotVX) is a newly-described flexuous rod-shaped mycovirus (Howitt et al., 2006) for which a full sequence has been published (AY055762). It is unusual amongst mycoviruses in having a ssRNA polyadenylated genome and flexuous, filamentous particles; these properties are only currently shared with Botrytis virus F. The ssRNA genome (6966 nt) has five predicted ORFs, the first (and largest) of which encodes an alpha-like replication protein of 158 kDa that in phylogenetic analysis groups closely with members of the genera *Allexivirus*, *Potexvirus* and *Mandarivirus* (see the *Tymovirales* proposal [2007.027-029P.A.Tymovirales] Annex Figure 1). In fact, within the RdRp region of the protein, BotVX has a very high 73% amino acid identity to Garlic virus A (genus *Allexivirus*). The third ORF, the putative coat protein, is also related to this group of viruses. Phylogenetic analysis and particle morphology therefore strongly suggest that BotVX should be considered a member of the family *Flexiviridae* (which until now has been composed only of plant viruses). A separate genus is appropriate because of the very different host, the absence of any recognizable cell-to-cell movement protein(s) that are invariably found in plant-infecting members and the presence of 3 other ORFs with no recognizable homology to other known viral proteins. The genus should be placed with its close relatives within the proposed family *Alphaflexiviridae* (part of the old family *Flexiviridae*; see the proposal to create a family *Alphaflexiviridae* [2007.018-020P.A.Alphaflexiviridae]).

**Origin of the new genus name:**

From the name of the type species.

**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:**

Adams MJ, Antoniw JF, Bar-Joseph M, Brunt AA, Candresse T, Foster GD, Martelli GP, Milne RG, Zavriev SK, Fauquet CM (2004) The new plant virus family *Flexiviridae* and assessment of molecular criteria for species demarcation. *Archives of Virology* **149**, 1045-1060.

Howitt RL, Beever RE, Pearson MN, Forster RL (2006) Genome characterization of a flexuous rod-shaped mycovirus, Botrytis virus X, reveals high amino acid identity to genes from plant 'potex-like' viruses. *Archives of Virology* **151**, 563-579.

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 *Alphaflexiviridae* [2007.018-020P.A.Alphaflexiviridae] and an order *Tymovirales* [2007.027-029P.A.Tymovirales]