Taxonomic proposal to the ICTV Executive Committee

This form should be used for all taxonomic proposals. Please complete all those modules that are applicable (and then delete the unwanted sections).

Code(s) assigned:	***2008.068B***	(to be completed by ICTV officers)

Short title: addition of a new species SIO1 within the family Podoviridae
(e.g. 6 new species in the genus *Zetavirus*; re-classification of the family *Zetaviridae* etc.)

Modules attached (please check all that apply):	**1** ☐	**2** ☐	**3** ☐	**4** ☐	**5** ☒	**6** ☐	**7** ☐		

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

Rob Lavigne (rob.lavigne@biw.kuleuven.be)
Hans-W. Ackermann (Ackermann@mcb.ulaval.ca)
Andrew M. Kropinski (Andrew_Kropinski@phac-aspc.gc.ca)

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

MODULE 5: **NEW SPECIES**

Code	***2008.068B***	(assigned by ICTV officers)

To create new species assigned as follows:

Genus:	***unassigned***
Subfamily:	
Family:	***Podoviridae***
Order:	***Caudovirales***

Fill in all that apply. Ideally, species should be placed within a genus, but it is acceptable to propose a species that is within a Subfamily or Family but not assigned to an existing genus (in which case put "unassigned" in the genus box)

Name(s) of proposed new species:

Roseobacter phage SIO1

Argument to justify the creation of the new species:
If the species are to be assigned to an existing genus, list the criteria for species demarcation and explain how the proposed members meet these criteria.

Roseophage SIO1, that infects the heterotrophic marine bacterium *Roseobacter* SIO67. This phage has an isometric capsid with a diameter of approximately 43 nm, a short tail, a buoyant density of 1.49 g cm^{-3} in CsCl, and a 39,906-bp dsDNA genome. Sequence similarities and relative positions within the genome suggest that three of the open reading frames (ORFs) are homologous to the primase, DNA polymerase, and endodeoxyribonuclease I proteins of coliphages T3 and T7. The DNA replication machinery of Roseophage SIO1 shows a clear homology with that of coliphages T3 and T7, suggesting that the process of DNA replication may be similar among these phages. The Roseophage SIO1 genome also encodes four predicted proteins involved in phosphate metabolism (RP PhoH, RP ribonucleotide reductase, RP Thy1, and RP endodeoxyribonuclease I) suggesting that phosphate recycling is important to Roseophage SIO1's life cycle. It is also conspicuous that the Roseo-phage SIO1 genome lacks a recognizable RNA polymerase, an essential component of the *Autographivirinae*.

References:

** Rohwer, Forest, Anca Segall, Grieg Steward, Victor Seguritan, Mya Breitbart, Felise Wolven, and Farooq Azam (2000) The complete genomic sequence of the marine phage Roseophage SIO1 shares homology with nonmarine phages. Limnol. Oceanogr. 45 (2), 408-418

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