This Word module should be used for all taxonomic proposals.

Please complete **Part 1** and:

either **Part 3** for proposals to create new taxa or change existing taxa

or **Part 2** for proposals of a general nature.

Submit the completed Word module, together with the accompanying Excel module named in Part 3, to the appropriate ICTV Subcommittee Chair.

For guidance, see the notes written in blue, below, and the help notes in file Taxonomic\_Proposals\_Help\_2018.

**Part 1:** **TITLE, AUTHORS, etc**

|  |  |  |  |
| --- | --- | --- | --- |
| **Code assigned:** | ***2018.054B*** | | (to be completed by ICTV officers) |
| **Short title:** (e.g. “6 new species in the genus *Zetavirus”*)  **To create one (1) new genus, *Popoffvirus*, containing a single species in the family *Myoviridae*** | | | |
|  | | | |
| **Author(s):** | | | |
| Andrew M. Kropinski, University of Guelph  Evelien M. Adriaenssens, University of Liverpool | | | |
| **Corresponding author with e-mail address:** | | | |
| Andrew M. Kropinski Phage.Canada@gmail.com | | | |
| **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 (there are six virus subcommittees: animal DNA and retroviruses, animal ssRNA-, animal ssRNA+, fungal and protist, plant, bacterial and archaeal) | | **Bacterial and Archaeal Viruses Subcommittee** | |
| **ICTV Study Group comments (if any) and response of the proposer:** | | | |
|  | | | |
|  | | | |
| Date first submitted to ICTV: | | | May 2018 |
| Date of this revision (if different to above): | | |  |

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| **ICTV-EC comments and response of the proposer:** |
|  |

**Part 2:** **NON-STANDARD**

Template for any proposal regarding ICTV procedures, rules or policy, not involving the creation of new taxonomy.

| **Text of proposal:** |
| --- |
|  |

**Part 3:** **PROPOSED TAXONOMY**

|  |
| --- |
| **Name of accompanying Excel module: 2018.054B.N.v1.Popoffvirus** |

The taxonomic changes you are proposing should be presented on an accompanying Excel module, 2017\_TP\_Template\_Excel\_module. Please enter the file name of the completed module in this box.

**Supporting material:**

| additional material in support of this proposal |
| --- |
| Please explain the reasons for the taxonomic changes you are proposing and provide evidence to support them. The following information should be provided, where relevant:   * **Species demarcation criteria**: Explain how new species differ from others in the genus and demonstrate that these differences meet the criteria previously established for demarcating between species. If no criteriahave previously been established, and if there will now be more than one species in the genus, please state the demarcation criteria you are proposing. * **Higher taxa**:   + There is no formal requirement to state demarcation criteria when proposing new genera or other higher taxa. However, a similar concept should apply in pursuit of a rational and consistent virus taxonomy.   + Please indicate the **origin of names** assigned to new taxa at genus level and above.   + For each new genus a **type species** must be designated to represent it. Please explain your choice. * **Supporting evidence**: The use of Figures and Tables is strongly recommended (note that copying from publications will require permission from the copyright holder). For phylogenetic analysis, try to provide a tree where branch length is related to genetic distance. |

**Species demarcation criteria** We have chosen 95% DNA sequence identity as the criterion for demarcation of species in this new genus. Each of the proposed species differs from the others with more than 5% at the DNA level as confirmed with the BLASTN algorithm.

**Source of the name of this taxon:** Named in honour of French scientist Michel Y. Popoff (d) formerly in the lnstitut Pasteur, Unité des Entérobacteries who isolated Aeromonas phage 56.

**History:** Aeromonas 56 was isolated by Popoff and Vieu [1] from Lake of Bois de Vincennes, near Paris, France. At that time Popoff was associated with Laboratoire d'Ichthyopathologie, Station de virologie et d\'immunologie, INRA, Thiverval-Grignon, France. The phage was used for typing. Morphologically phage 56 has a small head 61 nm in diameter and a contractile tail 81 x 17 nm [2]. Phage 51 was also isolated in France [3]. The authors of the former manuscript state “Comparative genomic analysis reveals that these phages, along with related prophage genomes, form a new coherent group within the *Myoviridae*.[2]” Our analyses indicate that they are sufficiently different to justify establishment of a new genus.

**GenBank Summary:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Phage name | RefSeq No. | INSDC | Size (Kb) | GC% | Protein | tRNA |
| vB\_AsaM-56 | NC\_019527.1 | JQ177063.1 | 43.55 | 55.4 | 83 | 0 |

Aeromonas phages 56 and 51 are identical to vB\_AsaM-56 are should be considered as strains.

**BLASTN homologs:** See above

**Phylogeny:** Phylogenetic tree, constructed using phylogeny.fr, of the major capsid proteins of phage vB\_AsaM-56 and its relatives.



| **References:** |
| --- |
| 1: Popoff M, Vieu JF. [Bacteriophages and lysotyping of Aeromonas salmonicida]. C  R Acad Sci Hebd Seances Acad Sci D. 1970 May 4;18:2219-22.  2: Comeau AM, Tremblay D, Moineau S, Rattei T, Kushkina AI, Tovkach FI, Krisch  HM, Ackermann HW. Phage morphology recapitulates phylogeny: the comparative  genomics of a new group of myoviruses. PLoS One. 2012;7(7):e40102.  3: Vincent AT, Paquet VE, Bernatchez A, Tremblay DM, Moineau S, Charette SJ.  Characterization and diversity of phages infecting Aeromonas salmonicida subsp.  salmonicida. Sci Rep. 2017 Aug 1;7(1):7054. |