

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

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| **Code assigned:** | ***2023.023B*** |  |
| **Short title:** To create 41 new species in the genus *Epseptimavirus* [*Caudoviricetes*; Family *Demerecviridae*] | | |
|  | | |

**Author(s) and email address(es)**

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| --- | --- |
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**Corresponding author**

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| Andrew M. Kropinski |

**List the ICTV Study Group(s) that have seen this proposal**

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| Caudoviricetes Study Group |

**ICTV Study Group comments and response of proposer**

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**ICTV Study Group votes on proposal**

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| --- | --- | --- | --- |
| **Study Group** | **Number of members** | | |
| **Votes support** | **Votes against** | **No vote** |
|  |  |  |  |
|  |  |  |  |

**Authority to use the name of a living person**

|  |  |
| --- | --- |
| **Is any taxon name used here derived from that of a living person (Y/N)** |  |

|  |  |  |
| --- | --- | --- |
| **Taxon name** | **Person from whom the name is derived** | **Permission attached (Y/N)** |
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**Submission dates**

|  |  |
| --- | --- |
| Date first submitted to SC Chair | May 2023 |
| Date of this revision (if different to above) |  |

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

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**Part 2:** **NON-TAXONOMIC PROPOSAL**

**Text of proposal**

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**Part 3:** **TAXONOMIC PROPOSAL**

**Name of accompanying Excel module**

|  |
| --- |
| 2023.023B.N.v1.Epseptimavirus\_41ns.xlsx |

**Abstract**

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| This proposal adds 41 new species of to the genus *Epseptimavirus.* |

**Text of proposal**

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| |  | | --- | | **Species demarcation criteria:** Two phages are assigned to the same species if their genomes are more than 95% identical over their genome length for isolates.  These values can be calculated by a number of tools, such as BLASTn [1,2] – usually calculated using intergenomic distance calculator VIRIDIC [3].  **Genus demarcation criteria:** In search for criteria that create cohesive and distinct genera that are reproducible and monophyletic, the Bacterial Viruses Subcommittee has established 70% nucleotide identity of the genome length as the cut-off for genera. Genus-level groupings should always be monophyletic in the signature genes, as tested with a phylogenetic tree [10]. | |

**Supporting evidence**

**Supporting evidence**

**Proposals:**

1. **To add forty-one (41) new species to the genus, *Epseptimavirus***

**A picture containing text, screenshot, line, stitch

Description automatically generated**

**Figure 1. VIRIDIC heat map:** VIRIDIC (Virus Intergenomic Distance Calculator; VIRIDIC (Virus Intergenomic Distance Calculator; [3]; http://rhea.icbm.uni-oldenburg.de/VIRIDIC/) computes pairwise intergenomic distances/similarities amongst phage genomes. Data values which are bordered in black correspond to strains. Blue, existing species; yellow, new species. Abbreviations: phg = phage; vir = virus; Esch = Escherichia; Salm = Salmonella; Phage = Phage. The Excel spreadsheet for this figure it attached to this proposal – 2023.023B.N.v1.Epseptimavirus\_42ns\_Suppl.xlsx

**Taxonomic Proposals:**

1. **To add forty-one (41) new species to the genus, *Epseptimavirus***

**Origin of the name of this taxon:** N/A

**Historical aspects:** The genus *Epseptimavirus* was created through Taxonomy Proposal 2019.099B. It currently consists of 37 species we are now adding 42 new species.

**Genome summary:**

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| **Accession No.** | **Phage name** | **Overall DNA sequence similarity (\*)** |
| CP000917.1 | Escherichia phage Eps7 | 100.0 |
| MZ501108.1 | Escherichia phage TrudiGerster | 76.1 |
| OQ359889.1 | Salmonella phage vB\_SenS\_UTK0009 | 75.9 |
| OQ362005.1 | Salmonella phage GSW6 | 73.3 |
| MW006478.1 | Salmonella phage GEC\_vB\_N3 | 78.0 |
| MW006481.1 | Salmonella phage GEC\_vB\_N7 | 79.4 |
| MW567727.1 | Salmonella phage STWB21 | 80.9 |
| MT074461.1 | Salmonella phage smaug | 76.8 |
| OQ674103.1 | Salmonella phage KKP | 80.7 |
| MT074453.1 | Salmonella phage misterkot | 85.6 |
| OQ383621.1 | Salmonella phage MET\_P1\_137\_112 | 85.2 |
| MT074468.1 | Salmonella phage rutana | 84.5 |
| MT074452.1 | Salmonella phage vaffelhjerte | 84.7 |
| MT074456.1 | Salmonella phage polluks | 83.3 |
| MT074454.1 | Salmonella phage ende | 84.7 |
| MK907267.1 | Escherichia phage vB\_EcoS-26175I | 84.4 |
| MZ501109.1 | Escherichia phage TrudiRoth | 85.0 |
| MW411578.1 | Salmonella phage SP\_Thor | 87.3 |
| MT074455.1 | Salmonella phage beppo | 85.6 |
| MT074460.1 | Salmonella phage bux | 85.3 |
| MT074447.1 | Salmonella phage phagemcphageface | 85.0 |
| MT074467.1 | Salmonella phage falkor | 84.8 |
| MK770410.1 | Salmonella phage SE3 | 86.9 |
| MZ501105.1 | Escherichia phage SuperGirl | 92.6 |
| MW206381.1 | Salmonella phage SP76 | 87.2 |
| OL451946.1 | Salmonella phage BD13 | 92.4 |
| OL502173.1 | Salmonella phage JN-S202001 | 88.2 |
| MT074464.1 | Salmonella phage bobsandoy | 86.9 |
| ON526840.1 | Salmonella phage GRNsp8 | 88.2 |
| MW423798.1 | Salmonella phage vB STyj5-1 | 85.4 |
| MK867835.1 | Salmonella phage vB\_SenS\_SB9 | 82.6 |
| ON855039.1 | Salmonella phage GSP001 | 84.5 |
| MT833283.1 | Escherichia phage vB\_EcoS\_Ace | 85.4 |
| MZ501076.1 | Escherichia phage IrmaTschudi | 85.1 |
| MZ501072.1 | Escherichia phage GreteKellenberger | 85.1 |
| OQ359890.1 | Salmonella phage vB\_SenS\_UTK0010 | 85.7 |
| OP045498.1 | Klebsiella phage 150049 | 87.5 |
| MZ570151.1 | Salmonella phage JNwz02 | 84.2 |
| LC659915.1 | Escherichia phage EscoHU1 | 85.9 |
| OQ341635.1 | Salmonella phage PRF-SP13 | 86.4 |
| MW357609.1 | Bacteriophage vB\_SabS\_Sds2 | 86.4 |
| MK947458.1 | Salmonella phage vB\_SenS\_SB10 | 89.7 |

**(\*) determined using VIRIDIC [3]**

Trudi Gerster (1919 – 2013)

Trudi Roth (1930 - 2016)

Irma Tschudi-Steiner (1912 - 2003)

Grete Kellenberger-Gujer (1919–2011)

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