

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

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| **Code assigned:** | **2021.038M** |  |
| **Short title:** Create six new species in the genus *Thogotovirus* (*Articulavirales*: *Orthomyxoviridae*) | | |
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**Author(s) and email address(es)**

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**Corresponding author**

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| García-Sastre A |

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

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| ICTV *Orthomyxoviridae* Study Group |

**ICTV study group comments and response of proposer**

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| N/A |

**Submission dates**

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| Date first submitted to SC Chair | May 28, 2021 |
| Date of this revision (if different to above) | September 17, 2021 |

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

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| * I would like to see a simple PB1-based phylogenetic tree, similar to that shown in 2021.024M, although I accept that the table of PB1-relatedness makes a good case for 4 new species.   Response: a simple PB1-based tree was added to this revision.   * The Word document is very poor with much unnecessary information. The RdRP tree should be reference properly if it is used.   Response: the Word document has been drastically shortened and the RdRP tree was removed.   * Most importantly, In the Excel spreadsheet, RefSeq numbers need to be replaced with GenBank numbers.   Response: Accession numbers in the Excel sheet were corrected/replaced.   * Could we also please have virus name abbreviations.   Response: Virus abbreviations were added.   * Read the EC-distributed guidance on species naming document, confirm that proposed species names adhere to the guidance, and confirm that you would like to keep the proposed species names as originally proposed.   Response: Read, confirmed, and confirmed. |

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

**Name of accompanying Excel module**

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| 2021.038M.R.Thogotovirus\_6nsp |

**Abstract**

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| Genus *Thogotovirus,* included in family *Orthomyxoviridae* family*,* harbors two viruses, Thogoto and Dhori viruses, assigned to two separate species. These viruses have single-stranded negative-sense genomes consisting of six segments that infect arthropods and mammals and/or birds.  In the last years the complete (6-segment) genome sequences of six related viruses have been determined. We propose to classify these in six new thogotovirus species*.* |

**Text of proposal**

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| |  | | --- | | Coding-complete six-segment sequences for Thogoto virus (THOV), strain="SiAr126”,  are available in GenBank, Taxonomy ID: 126796  Segment 6: NC\_006504.1 Proteins M (YP\_145806) and ML (YP\_145805)  Segment 5: NC\_006507.1 Protein NP (YP\_145809.1)  Segment 4: NC\_006506.1 Protein GP75 (YP\_145808.1)  Segment 3: NC\_006496.1 Protein PA (YP\_145795.1)  Segment 2: NC\_006495.1 Protein PB1 (RdRp, YP\_145794.1)  Segment 1: NC\_006508.1 Protein PB2 (YP\_145810.1)  Some segments of Dhori virus (DHOV) strain Indian/1313/61 are available in GenBank, Taxonomy ID: 11319.  Thogoto-like viruses included in the taxonomy of GenBank are classified as follows:   * [***Dhori thogotovirus***](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Tree&id=11318&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Batken virus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=53017&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Dhori virus (strain Indian/1313/61)**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=11319&lvl=3&lin=f&keep=1&srchmode=1&unlock) * [***Thogoto thogotovirus***](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Tree&id=11569&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Jos virus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=1027466&lvl=3&lin=f&keep=1&srchmode=1&unlock)(JOSV)   + [**Thogoto virus (isolate SiAr 126)**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=126796&lvl=3&lin=f&keep=1&srchmode=1&unlock) * [**unclassified *Thogotovirus***](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Tree&id=352235&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Araguari virus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=352236&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Aransas Bay virus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=1428582&lvl=3&lin=f&keep=1&srchmode=1&unlock)(ABV)   + [**Bourbon virus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=1618189&lvl=3&lin=f&keep=1&srchmode=1&unlock)(BRBV)   + [**Oz virus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=2137161&lvl=3&lin=f&keep=1&srchmode=1&unlock)(OZV)   + [**Rondonia thogotovirus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=2697643&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Soybean thrips thogotovirus 1**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=2797871&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Soybean thrips thogotovirus 2**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=2796554&lvl=3&lin=f&keep=1&srchmode=1&unlock)   + [**Thailand tick thogotovirus**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=2654565&lvl=3&lin=f&keep=1&srchmode=1&unlock)(TT-THOV)   + [**Upolu virus (UPOV**](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Info&id=1428581&lvl=3&lin=f&keep=1&srchmode=1&unlock)**)**   Of these, Araguari virus falls within genus *Quaranjavirus* (separate TaxoProp).  Additional viruses include:  Hubei orthoptera virus 6, Sinu virus (SINUV), Varroa orthomyxovirus-1, Neko harbor virus;  The six segments of the thogotovirus-like Jos virus, Upolu/ Aransas Bay virus, Aransas Bay virus, Bourbon virus, Oz virus, Thailand tick thogotovirus and Sinu Bay virus are almost totally or totally sequenced and closely related but different from those of the already classified as two species of the genus *Thogotovirus*, Thogoto and Dhori viruses, justifying their inclusion as representatives of new species within the *Thogotovirus* genus.  The proposed species names are:  Jos virus (JOSV): *Thogotovirus josense* (from Jos, Nigeria)  Upolu virus (UPOV): *Thogotovirus upoluense* (from Upolu Cay, Australia)  Bourbon virus (BRBV): *Thogotovirus bourbonense* (from Bourbon County, KS, USA)  Oz virus (OZV): *Thogotovirus ozense* (after Oz, Japan)  Thailand tick thogotovirus (TT-THOV): *Thogotovirus thailandense* after Thailand)  Sinu virus (SINUV): *Thogotovirus sinuense* (after Sinu, Colombia) | |

**Supporting evidence**

**Table of amino acid identity/coverage between PB1 segments of new thogotoviruses together with the two classified thogotoviruses and the more distant influenza D virus (IDV). Note that based on the close identity between UPOV and ABV, both are considered members of the same species.**

**TT\_THOV**

**JOSV**

**TT-THOV**

**SINUV**

**THOV**

**DHOV**

**OZV**

**THOV**

**DHOV**

100

100

***Thogotovirus***

***Orthomyxoviridae***

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**UPOV**

**ABV**

**JOSV**

**UPOV**

**BRBV**

**ABV**

**BRBV**

**OZV**

**IDV**

****

**SINUV**

**IDV**

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100

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**93**

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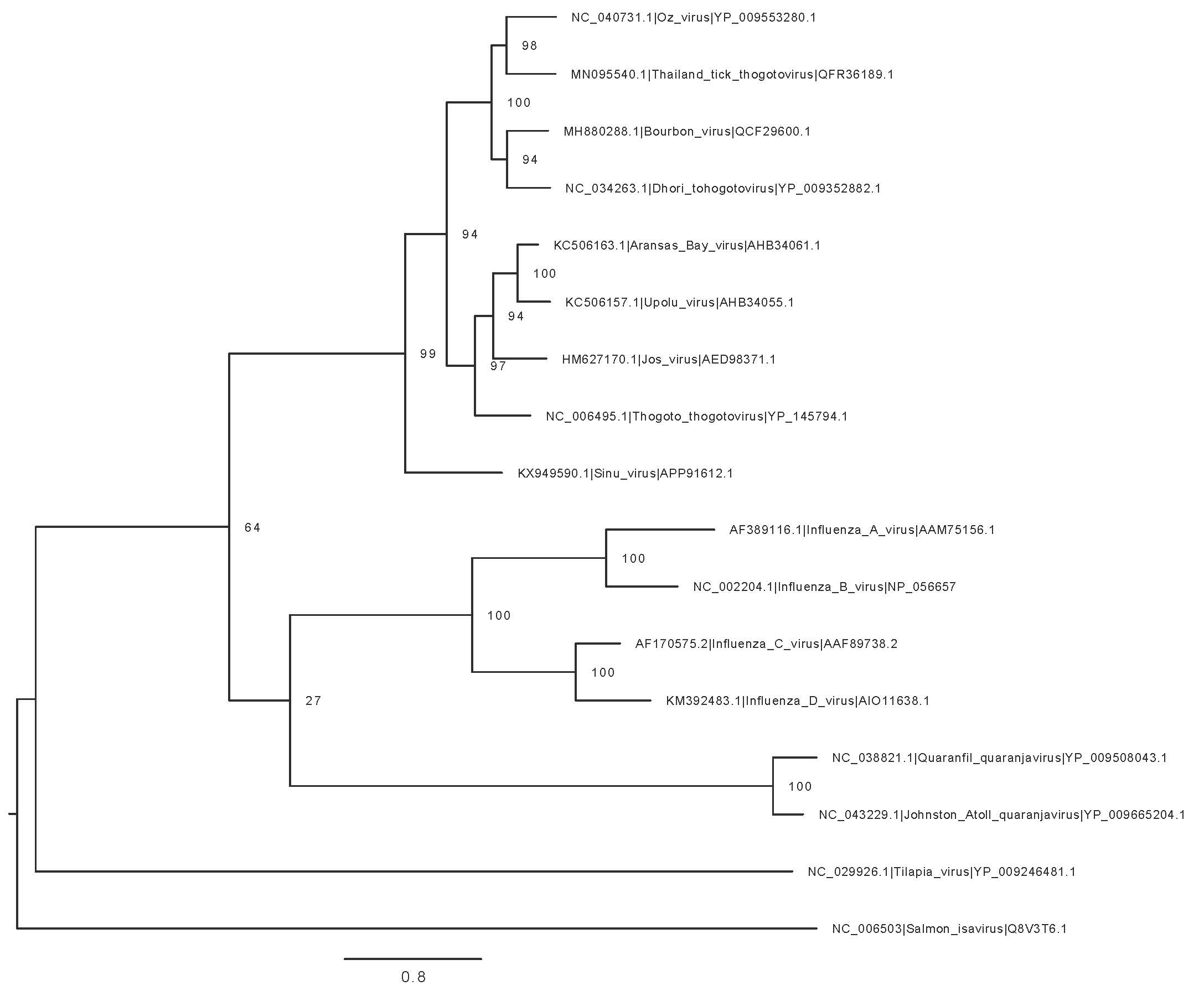
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**Phylogenetic tree of PB1 segments of new thogotoviruses together with the two classified thogotoviruses and the rest of the different members of class *Insthoviricetes***

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