This form should be used for all taxonomic proposals. Please complete all those modules that are applicable.



For guidance, see the notes written in blue and the separate document “Help with completing a taxonomic proposal”

Please try to keep related proposals within a single document.

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Code assigned:** | ***2017.008M*** | | | | (to be completed by ICTV officers) |
| **Short title:** Two (2) new species and one (1) renamed species in the genus *Orthonairovirus* (*Bunyavirales*: *Nairoviridae*) | | | | | |
| **Modules attached**  (Modules 1, 4 and either 2 or 3 are required. | | **1**  **2  3  4** | | | |
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| Jens H. Kuhn, [kuhnjens@mail.nih.gov](mailto:kuhnjens@mail.nih.gov) | | | | | |
| **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) | | | **ICTV *Bunyaviridae* Study Group** | | |
| **ICTV Study Group comments (if any) and response of the proposer:** | | | | | |
|  | | | | | |
|  | | | | | |
| Date first submitted to ICTV: | | | | June 8, 2017 | |
| Date of this revision (if different to above): | | | |  | |

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

**Part 2**: **PROPOSED TAXONOMY**

|  |
| --- |
| Present the proposed new taxonomy on accompanying spreadsheet |
| **Name of accompanying spreadsheet: 2017.008M.N.v1.Orthonairovirus\_2sp1ren** |

Please display the taxonomic changes you are proposing on the accompanying spreadsheet module 2017\_TP\_Template\_Excel\_module. Submit both this and the spreadsheet to the appropriate ICTV Subcommittee Chair.

**Part 4:** **APPENDIX**: supporting material

| In 2016, the genus *Orthonairovirus* (*Bunyavirales*: *Nairoviridae*) was thoroughly revised (TP 2016.026M) and this revision was ratified in 2017. Since TP 2016.026M was submitted, at least seven previously unsequenced or only partially sequenced putative orthonairoviruses were genomically characterized: Artashat virus, Burana virus, Caspiy virus, Chim virus, Geran virus, Tamdy virus, and Uzun-Agach virus (partial sequences were described in the listed references; the sequences were since completed and deposited to GenBank). We performed the same phylogenetic analyses as in TP 2016.026M including these new virus sequences to determine their taxonomic positions. Briefly, a set of orthonairovirus genomes were aligned using the CLUSTAL algorithm. Because the nairovirus sequences of all analyzed orthonairoviruses were so different that the alignment reached substitution saturation (no detection of signal), alignments were instead implemented at the amino acid (aa) level (using MEGA Version 6). Non-coding regions of S segments therefore had to be excluded. Additional manual editing was performed to ensure the highest possible quality of alignments. Neighbor-joining (NJ) analysis at the aa level was performed due to the observed high variability of the underlying nt sequences. The statistical significance of the tree topology was evaluated by bootstrap re-sampling of the sequences 1000 times. Phylogenetic analyses were performed using MEGA Version 6. The results of these analyses are shown in Figures 1–3 (S, M, and L segment, respectively; newly added viruses are marked by blue dots). Accordingly, 5 of these viruses can be assigned to existing species, whereas Artashat virus and Chim virus need to be assigned to novel species. We propose to name these new species after their member viruses and in line with the current bunyaviral non-Latinized binomial species name format: *Artashat orthonairovirus* and *Chim orthonairovirus*. Furthermore, we propose to change the current species name *Burana orthonairovirus* to *Tamdy orthonairovirus* to reflect the much richer research history on Tamdy virus in comparison to Burana virus. |
| --- |

Figure 1

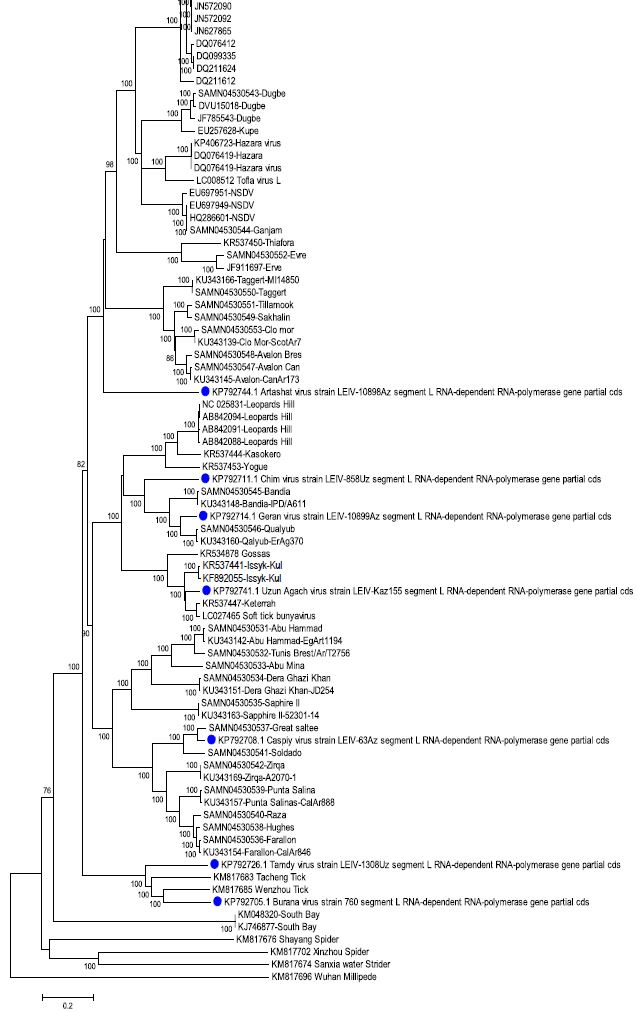


Figure 2

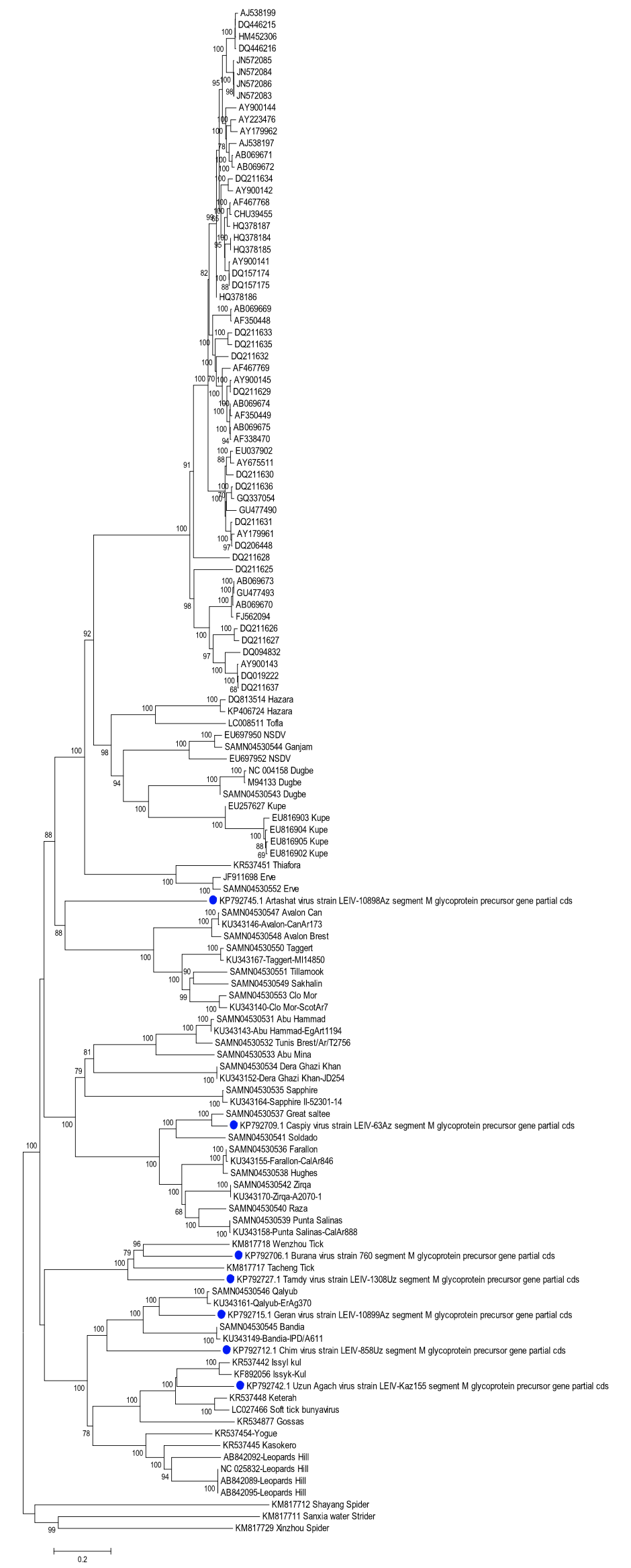
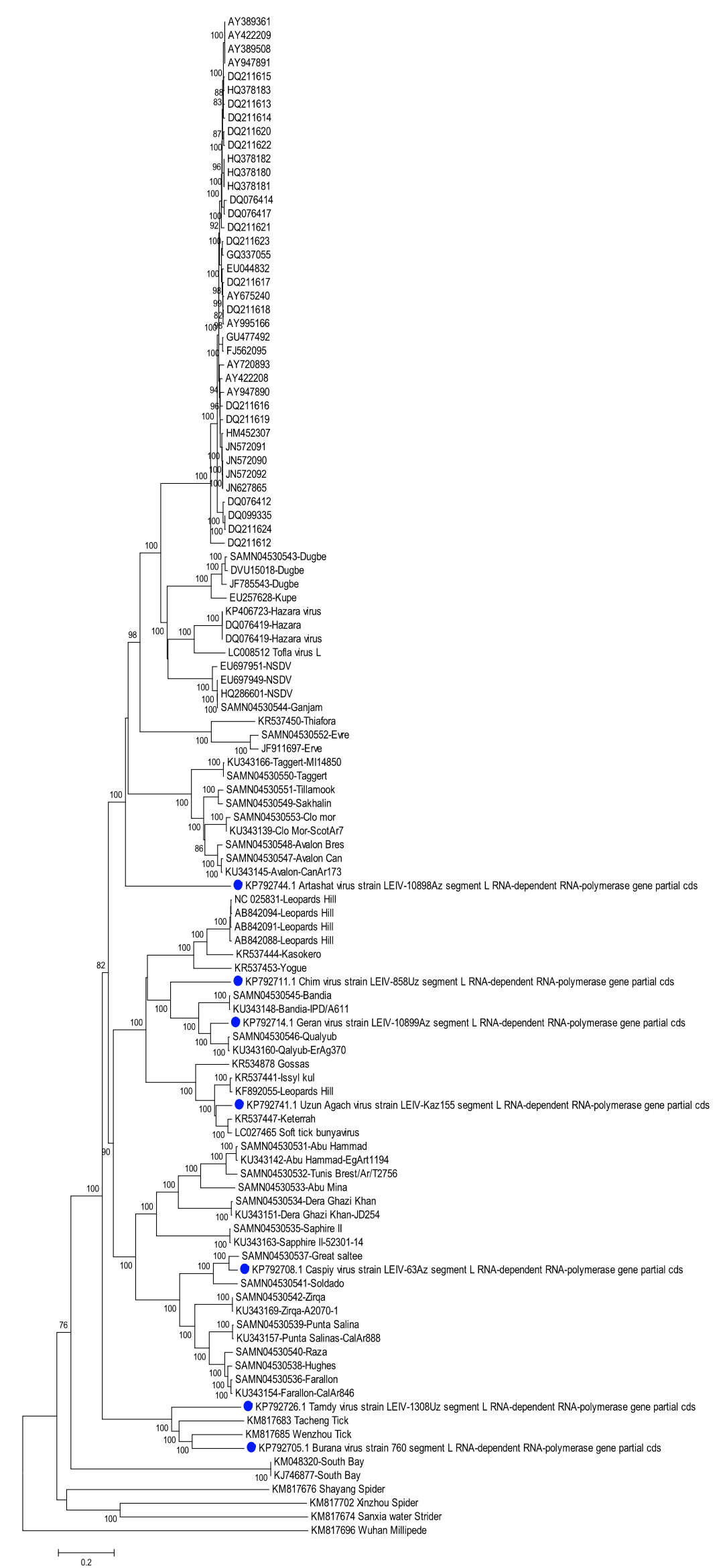


Figure 3



| **References:** |
| --- |
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