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Changes to virus taxonomy and the ICTV Statutes ratified by the International Committee on Taxonomy of Viruses (2023)

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Abstract

This article reports changes to virus taxonomy and taxon nomenclature that were approved and ratified by the International Committee on Taxonomy of Viruses (ICTV) in April 2023. The entire ICTV membership was invited to vote on 174 taxonomic proposals that had been approved by the ICTV Executive Committee in July 2022, as well as a proposed revision of the ICTV Statutes. All proposals and the revised ICTV Statutes were approved by a majority of the voting membership. Of note, the ICTV continued the process of renaming existing species in accordance with the recently mandated binomial format and included gene transfer agents (GTAs) in the classification framework by classifying them as viriforms. In total, one class, seven orders, 31 families, 214 genera, and 858 species were created.

Introduction

Changes to virus taxonomy (the universal scheme of virus classification of the International Committee on Taxonomy of Viruses [ICTV]) take place annually and are the result of a multi-stage process. In accordance with the ICTV Statutes (<https://ictv.global/about/statutes>), proposals are submitted to the ICTV Executive Committee (EC) and undergo a review process that involves input from the ICTV Study Groups (SGs) and Subcommittees (SCs), other interested virologists, and the EC. After final approval by the EC, proposals are placed on the ICTV website (<https://ictv.global>) for viewing by the full ICTV membership, which ratifies them by online voting [1].

The latest set of proposals approved by the EC was made available on the ICTV website in February 2023 (see <https://ictv.global/files/proposals/approved> for all proposals combined into a single zip file, and use the links provided in the References to access individual proposals). A list of proposals was emailed on March 8, 2023, to the 185 members of the ICTV – the EC Members, SC Members (including the SG chairs and co-chairs), ICTV Life Members, and ICTV National Representatives. Members were then requested to vote on whether to ratify the taxonomic proposals. Voting closed on April 8, 2023.

Changes to virus taxonomy and the ICTV Statutes

All proposals [1–174] were ratified by ICTV members (72% of eligible voters), in every case receiving a majority of “yes” votes (99–100%). A summary of the taxonomy changes enacted by the proposals is provided in Table 1. The new class, orders, and families ratified in 2023 are listed in Table 2. Each proposal is cited and listed in the References to acknowledge the authors’ efforts and to provide links to the specific proposal on the ICTV website. These documents remain available for those who would like to see the details of the proposals.

Of note, a large number of proposals renamed existing species for compliance with the recently mandated binomial nomenclature format. As a result, 8,982 out of the current 11,273 species (80%) now have binomial names. The process will be concluded in 2023, with the remaining 2,291 species being renamed.

Another notable taxonomic change approved in this ratification was the inclusion of gene transfer agents (GTAs) in the classification scheme as viriforms [154].

A change to the ICTV Statutes was also ratified in the vote and approved in May 2023 by the Virology Division of the International Union of Microbiological Societies (IUMS), which is the parent organization of the ICTV. The new ICTV Statutes can be found at <https://ictv.global/about/statutes>. The purpose of the approved change was to specify a three-year cycle for the ICTV Plenary Meeting. As stated in the new text of Article 5.1: “Plenary Meetings of the full ICTV membership shall be held every three years. In the years when it coincides with the International Congresses of Virology (ICV) organized by the IUMS, the Plenary Meeting shall be held in conjunction with the ICV. Otherwise, the Plenary Meeting shall be held online no later than one month after the Executive Committee annual meeting”.

Conclusion

All proposals submitted for ratification were ratified by a majority vote of the ICTV, and the additions and changes to virus classification are now part of the official ICTV taxonomy. New ICTV Statutes are now in force as well. An up-to-date list of all approved taxa, which now includes 11,273 virus species, can be found on the ICTV website: See <https://ictv.global/msl> for the Master Species List (MSL) and <https://ictv.global/vmr> for the Virus Metadata Resource (VMR), the latter of which provides an exemplar virus isolate for each species along with the GenBank accession number of the isolate.

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Data availability

All Taxonomy Proposals and all other ICTV resources mentioned in this article are freely available at the ICTV website (<http://www.ictv.global>).

References

1. Siddell S, Adriaenssens EM, Alfenas-Zerbini P, Dutilh BE, García ML, Junglen S, Krupovic M, Kuhn JH, Lambert AJ, Lefkowitz EJ, Łobocka M, Mushegian AR, Oksanen HM, Robertson DL, Rubino L, Sabanadzovic S, Simmonds P, Suzuki N, Van Doerslaer K, Vandamme A-M, Varsani

- A, Zerbini FM, Smith DB (2023) Virus taxonomy and the role of the International Committee on Taxonomy of Viruses (ICTV). *J Gen Virol* 104:001840. 10.1099/jgv0.001840 [PubMed: 37141106]
2. Laurinmäki P, Ekström J-O, Butcher SJ, Hultmark D (2022) Create a new family (*Noraviridae*), genus (*Orthonoravirus*) and species (*drosophilae*) in the order *Picornavirales*. https://ictv.global/ictv/proposals/2022.001S.Picornavirales_Inf.zip
 3. Postel A, Becher P, Smith DB (2022) Create eight new species in the genus *Pestivirus* (*Flaviviridae*) https://ictv.global/ictv/proposals/2022.002S.Pestivirus_8nsp.zip
 4. Chen YP, Valles SM, Firth A, de Miranda J, Ryabov E, Schroeder D, Echeverría MG, Zheng HQ, Jan E, Parry R. (2022) Rename all species in the family to comply the ICTV-mandated binomial format (*Picornavirales: Dicistroviridae*) https://ictv.global/ictv/proposals/2022.003S.Dicistroviridae_rename.zip
 5. Chen YP, Valles SM, Firth A, de Miranda J, Ryabov E, Schroeder D, Echeverría MG, Zheng HQ, Jan E, Parry R. (2022) Rename all species in the family to comply the ICTV-mandated binomial format (*Picornavirales: Iflaviridae*) https://ictv.global/ictv/proposals/2022.004S.Iflaviridae_rename.zip
 6. Walker PJ, Huang J, Ziebuhr J, Moody N, Dong X (2022) Rename three species in the genus *Okavirus* (*Nidovirales: Roniviridae*) https://ictv.global/ictv/proposals/2022.005S.Roniviridae_rename.zip
 7. Valles SM (2022) Create a new species in the genus *Cripavirus* (*Dicistroviridae*) https://ictv.global/ictv/proposals/2022.006S.Cripavirus_1nsp.zip
 8. Postler TS, Kuhn JH (2022) Rename one genus and all species in the family to comply with the ICTV-mandated binomial format (*Amarillovirales: Flaviviridae*) https://ictv.global/ictv/proposals/2022.007S.Flaviviridae_1genren_sprenamed.zip
 9. Benk M, Brandt CR, Bryant NA, Dastjerdi A, Davison AJ, Depledge DP, Doszpoly A, Gatherer D, Gompels UA, Hartley CA, Inoue N, Jarosinski KW, Kaul R, Lacoste V, Norberg P, Origgi FC, Orton RJ, Pellett PE, Schmid DS, Spatz SJ, Stewart JP, Szpara ML, Trimpert J, Vaz P, Waltzek TB (2022) Abolish 6 species and rename 1 family, 4 genera and 124 species in the order *Herpesvirales* https://ictv.global/ictv/proposals/2022.001D.Herpesvirales_1renfam_4rogen_124rensp_6absp.zip
 10. Benk M, Brandt CR, Bryant NA, Dastjerdi A, Davison AJ, Depledge DP, Doszpoly A, Gatherer D, Gompels UA, Hartley CA, Inoue N, Jarosinski KW, Kaul R, Lacoste V, Norberg P, Origgi FC, Orton RJ, Pellett PE, Schmid DS, Spatz SJ, Stewart JP, Szpara ML, Trimpert J, Vaz P, Waltzek TB (2022) Create 9 new species in the family *Orthoherpesviridae* (*Herpesvirales*) https://ictv.global/ictv/proposals/2022.002D.Herpesvirales_9nsp.zip
 11. van Oers MM, Harrison RL, Abd Allah AMM (2022) Binominal naming system for virus species in the order *Lefavirales* (Families *Baculoviridae*, *Nudiviridae* and *Hytrosaviridae*) https://ictv.global/ictv/proposals/2022.003D.Lefavirales_106rensp.zip
 12. van Oers MM, Abd-Alla AMM, Bateman KS, Harrison RL, Herniou EA, Hu Z, Jehle JA, Krell PJ, Ribeiro BM (2022) Create five new species in genus *Alphabaculovirus* and one new species in genus *Gammabaculovirus* (*Lefavirales: Baculoviridae*) https://ictv.global/ictv/proposals/2022.004D.Baculoviridae_6nsp.zip
 13. Penzes JJ, Canuti M, Söderlund-Venermo M, François S, Eis-Hübinger AM (2022) *Parvoviridae*: introduction of the binomial nomenclature, establishment of two new genera and the classification eligibility of parvoviruses derived from ambiguous host origin https://ictv.global/ictv/proposals/2022.005D.Parvoviridae_2ngen_49nsp_125rensp.zip
 14. Duarte MA, Silva JMF, Brito CR, Teixeira DS, Melo FL, Ribeiro BM, Nagata T, Campos FS (2022) Create one new species in the genus *Chaphamaparvovirus*, and one new species in the genus *Dependoparvovirus*, in the family *Parvoviridae* https://ictv.global/ictv/proposals/2022.006D.Parvoviridae_2nsp.zip
 15. Nakai M, Asgari S, Bideshi D, Bigot Y, Cheng X-W, Federici BA, Huang G-H (2022) Rename three species in the genus *Ascovirus* and one species in the genus *Tourvirus* (*Pimascovirales: Ascoviridae*). https://ictv.global/ictv/proposals/2022.007D.Ascoviridae_4rensp.zip
 16. Varsani A, Kraberger S, Opriessnig T, Maggi F, Celer V, Okamoto H, Biagini P (2022) Rename 146 species in the family *Anelloviridae* https://ictv.global/ictv/proposals/2022.008D.Anelloviridae_146rensp.zip

17. Varsani A, Harrach B, Roumagnac P, Benk M, Breitbart M, Delwart E, Franzo G, Kazlauskas D, Rosario K, Segalés J, Krupovic M (2022) Establishing 48 new species and renaming 101 species in the family *Circoviridae* https://ictv.global/ictv/proposals/2022.009D.Circoviridae_rensf101_nsp48.zip
18. Postler TS, Di Serio F, Briese T, Groschup MH, Jonson G, Neriya Y, Palacios G, Sasaya T, Song J-W, Tomitaka Y, Kuhn JH (2021) Rename all species in the family to conform with ICTV-mandated binomial format (*Bunyavirales: Phenuiviridae*) https://ictv.global/ictv/proposals/2021.002M.Phenuiviridae_sprenamed.zip
19. Postler TS, Buchmeier MJ, Charrel RN, Clegg JCS, de la Torre JC, de Lamballerie X, Gonzalez J-PJ, Günther S, Hepojoki J, Lukashevich IS, Radoshitzky SR, Romanowski V, Salvato MS, Sironi M, Stenglein MD, Kuhn JH (2021) Rename all species in the family to comply with the ICTV-mandated binomial format (*Bunyavirales: Arenaviridae*) https://ictv.global/ictv/proposals/2021.008M.Arenaviridae_rename.zip
20. Postler TS, Biedenkopf N, Bukreyev A, Chandran K, Di Paola N, Formenty PBH, Griffiths A, Hume A, Mühlberger E, Netesov SV, Palacios G, Paw ska JT, Smither S, Takada A, Wahl V, Kuhn JH (2021) Rename all species in the family to comply with the ICTV-mandated binomial format (*Mononegavirales: Filoviridae*) https://ictv.global/ictv/proposals/2021.012M.Filoviridae_sprenamed.zip
21. Postler TS, Bradfute SB, Calisher CH, Klingström J, Laenen L, Maes P, Kuhn JH (2021) Rename all species in the family to comply with the ICTV-mandated binomial format (*Bunyavirales: Hantaviridae*) https://ictv.global/ictv/proposals/2021.013M.Hantaviridae_sprename.zip
22. Di Paola N, Dheilly NM, Kuhn JH, Junglen S, Paraskevopoulou S, Postler TS, Shi M (2021) Create ten new species and two new genera in the families *Aliusviridae* and *Chuviridae* (*Jingchuvirales*) https://ictv.global/ictv/proposals/2021.015M.Jingchuvirales_2ngen_10nsp.zip
23. Postler TS, Alkhovsky SV, Av i -Županc T, Bergeron É, Burt F, Ergünay K, Garrison AR, Marklewitz M, Mirazimi A, Palacios G, Papa A, Paw ska JT, Spengler JR, Kuhn JH (2021) Rename all species in the family to comply with the ICTV-mandated binomial format (*Bunyavirales: Nairoviridae*) https://ictv.global/ictv/proposals/2021.017M.Nairoviridae_sprenamed.zip
24. Postler TS, Balkema-Buschmann A, Drexler JF, Duprex PW, Plemper RK, Vanmechelen B, Kuhn JH, Maes P (2021) Rename all species in the family to comply with the ICTV-mandated binomial format (*Mononegavirales: Paramyxoviridae*) https://ictv.global/ictv/proposals/2021.026M.Paramyxoviridae_sprename.zip
25. Postler TS, Hughes HR, Alkhovsky SV, Beer M, Blair CD, Calisher CH, Lambert AJ, de Souza WM, Marklewitz M, Kuhn JH (2021) Renaming all species of *Peribunyaviridae* to fit the newly ICTV-mandated binomial species name format https://ictv.global/ictv/proposals/2021.028M.Peribunyaviridae_sprename.zip
26. Postler TS, Ballinger MJ, Junglen SJ, Kuhn JH, Pauvolid-Corrêa A (2021) Rename all species in the family to comply with the ICTV-mandated binomial format (*Bunyavirales: Phasmaviridae*) https://ictv.global/ictv/proposals/2021.031M.Phasmaviridae_sprename.zip
27. Postler TS, Brown PA, Buchholz UJ, de Swart RL, Drexler JF, Duprex PW, Easton AJ, Li J, Spann KM, Thornburg NJ, van den Hoogen B, Williams JV, Kuhn JH (2021) Rename all species in the family to comply with the ICTV-mandated binomial format (*Mononegavirales: Pneumoviridae*) https://ictv.global/ictv/proposals/2021.033M.Pneumoviridae_sprename.zip
28. Bejerman N, Debat H, Dietzgen RG, Kondo H, Ramos-González P, Whitfield AE, Walker PJ, Freitas-Astúa J (2022) Create two new species in the genus *Alphanucleorhabdovirus*, and four new species in the genus *Betanucleorhabdovirus*, subfamily Betarhabdovirinae (*Mononegavirales: Rhabdoviridae*) https://ictv.global/ictv/proposals/2022.001M.Alpha_and_betanucleorhabdoviruses_6nsp.zip
29. Walker PJ, Freitas-Astúa J, Bejerman N, Dietzgen RG, Fooks A, Kondo H, Kurath G, Ramos-Gonzalez PL, Tesh RB, Tordo N, Vasilakis N, Whitfield AE (2022) Create one new genus (*Thriprhavirus*) and 14 new species in the subfamily *Alpharhabdovirinae* (*Mononegavirales: Rhabdoviridae*) https://ictv.global/ictv/proposals/2022.002M.Alpharhabdovirinae_1ngen14nsp.zip

30. Chen Y-M, Sadiq S, Holmes EC, Zhang Y-Z (2022) Create one new genus including one new species in the family *Arenaviridae* https://ictv.global/ictv/proposals/2022.003M.Arenaviridae_1ngen_1nsp.zip
31. Postler TS, Kuhn JH (2022) Rename all species in the family to comply with the ICTV-mandated binomial format (*Birnaviridae*) https://ictv.global/ictv/proposals/2022.004M.Birnaviridae_sprenamed.zip
32. Cao M, Zhang S, Tian X, Navarro B, Di Serio F (2022) Create two new species in genus *Coguvirus* (*Bunyavirales: Phenuiviridae*) https://ictv.global/ictv/proposals/2022.005M.Coguvirus_2nsp.zip
33. Di Serio F, Xylogianni E, Navarro B (2022) Create two new species in the genus *Coguvirus*, family *Phenuiviridae*, order *Bunyavirales* https://ictv.global/ictv/proposals/2022.006M.Coguvirus_2nsp2.zip
34. Bejerman N, Debat H, Dietzgen RG, Kondo H, Ramos-González P, Whitfield AE, Walker PJ, Freitas-Astúa J (2022) Create ten new species in the genus *Cytorhabdovirus*, subfamily *Betarhabdovirinae* (*Mononegavirales: Rhabdoviridae*) https://ictv.global/ictv/proposals/2022.007M.Cytorhabdovirus_10nsp.zip
35. Walker PJ, Tu C, Gong W (2022) Create two new species in the genus *Ephemerovirus* (*Mononegavirales: Rhabdoviridae*) https://ictv.global/ictv/proposals/2022.008M.Ephemerovirus_2nsp.zip
36. Biedenkopf N, Bukreyev A, Chandran K, Di Paola N, Formenty PBH, Griffiths A, Hume A, Kuhn JH, Mühlberger E, Netesov SV, Palacios G, Paw ska JT, Smither S, Takada A, Wahl V (2022) Rename two genera (*Mononegavirales: Filoviridae*) https://ictv.global/ictv/proposals/2022.009M.Filoviridae_2genenamed.zip
37. Kuhn JH, Koonin E, Wolf Y, Rodrigues TCS, Waltzek TB (2022) New free-floating negarnaviricot family, genus, and species https://ictv.global/ictv/proposals/2022.010M.Fraservirus_1fam_1ngen_1nsp.zip
38. Hepojoki J (2022) Create two new species in the genus *Hartmanivirus* (*Arenaviridae*) https://ictv.global/ictv/proposals/2022.011M.Hartmanivirus_2nsp.zip
39. Paraskevopoulou S, Ye G, Li J-M (2022) Create 7 new genera, create 11 new species (*Mononegavirales: Lispiviridae*) https://ictv.global/ictv/proposals/2022.012M.Lispiviridae_7ngen_11nsp.zip
40. Goüy de Bellocq J (2022) One new species in the genus *Mammarenavirus* (*Arenaviridae*) https://ictv.global/ictv/proposals/2022.013M.Mammarenavirus_1nsp.zip
41. Jiang D, Ayllón MA, Marzano S-Y, Kondo H, Turina M (2022) Establishment of thirteen new species in genera *Auricularimonavirus*, *Hubranonavirus*, *Lentimonavirus*, *Penicilliumonavirus*, *Plasmopamonavirus* and *Sclerotimonavirus* in family *Mymonaviridae* (*Mononegavirales*) https://ictv.global/ictv/proposals/2022.014M.Mymonaviridae_13nsp.zip
42. Alkhovsky SV, Av i -Županc T, Bergeron É, Burt F, Ergünay K, Garrison AR, Kuhn JH, Marklewitz M, Mirazimi A, Papa A, Paw ska JT, Spengler JR, Palacios G (2022) Four new species in family *Nairoviridae* (*Bunyavirales*) https://ictv.global/ictv/proposals/2022.015M.Nairoviridae_4nsp.zip
43. Dietzgen RG, Kuhn JH, Vasilakis N, Firth AE, Paraskevopoulou S (2022) Create one new species in genus *Formivirus* and one new species in genus *Orinovirus* (*Mononegavirales: Nyamiviridae*) https://ictv.global/ictv/proposals/2022.016M.Nyamiviridae_2nsp.zip
44. Zhao L, Liu R, Zhang G, Yuan Z, Xia H (2022) Create a new species in genus *Orthobunyavirus* (*Bunyavirales: Peribunyaviridae*) https://ictv.global/ictv/proposals/2022.017M.Orthobunyavirus_1nsp.zip
45. Hughes HR, Alkhovsky S, Beer M, Blair CD, Calisher CH, Drebot M, de Souza WM, Marklewitz M, Postler TS, Kuhn JH, Lambert AJ (2022) Create 29 new species and abolish 4 species in the genus *Orthobunyavirus* (*Peribunyaviridae*) https://ictv.global/ictv/proposals/2022.018M.Orthobunyavirus_29nsp_abolish4sp.zip
46. Ballinger MJ, Pauvolid-Corrêa A, Junglen S (2022) Create two new species in the genus *Orthophasmavirus* and one new species in the genus *Feravirus* (*Phasmaviridae*) https://ictv.global/ictv/proposals/2022.019M.Phasmaviridae_3nsp.zip

47. Briese T, Di Serio F, Groschup MH, Jonson GB, Neriya Y, Sasaya T, Song J-W, Tomitaka Y, Kuhn JH, Palacios G (2022) Two new genera, 10 new species, and 1 moved and renamed species in family *Phenuiviridae* (*Bunyavirales*) https://ictv.global/ictv/proposals/2022.020M.Pheniviridae_2ngen_10nsp_1rensp.zip
48. Bejerman N, Debat H, Dietzgen RG, Kondo H, Ramos-González P, Whitfield AE, Walker PJ, Freitas-Astúa J (2022) Create nine new species in the genus *Varicosavirus*, subfamily *Betarhabdovirinae* (*Mononegavirales: Rhabdoviridae*) https://ictv.global/ictv/proposals/2022.021M.Varicosavirus_9nsp.zip
49. Walker PJ, Freitas-Astúa J, Bejerman N, Dietzgen RG, Kondo H, Kurath G, Ramos-González PL, Tesh RB, Tordo N, Vasilakis N, Whitfield AE (2022) Create two new species in the genus *Vesiculovirus* (*Mononegavirales: Rhabdoviridae*) https://ictv.global/ictv/proposals/2022.022M.Vesiculovirus_2nsp.zip
50. Laso-Pérez Rafael, Wu Fabai, Crémière Antoine, Speth Daan R., Magyar John S., Krupovic Mart, Orphan Victoria J. (2022) Create three new orders and 5 new families of viruses associated with methanotrophic archaea https://ictv.global/ictv/proposals/2022.001A.Nakonvirales_Maximonvirales_Coyopavirales_3no.zip
51. Medvedeva S, Sun J, Yutin N, Koonin EV, (2022) Create one new order, *Atroposvirales*, and two new families, *Verdandiviridae*, and *Skuldviridae*, for classification of viruses of *Asgardarchaeota* https://ictv.global/ictv/proposals/2022.002A.Verdandiviridae_nf_Atropovirales_no.zip
52. Zhou Y, Krupovic M, Wang Y (2022) Create two new orders, *Juravirales* and *Magrovirales*, including two and one new families of marine archaeal viruses, respectively https://ictv.global/ictv/proposals/2022.003A.Caudoviricetes_2no_3nf.zip
53. Krupovic M, Geslin C, Schmitz RA, Bize A (2022) Create 3 new families for classification of viruses infecting methanogenic archaea https://ictv.global/ictv/proposals/2022.004A.Caudoviricetes_3nf.zip
54. Kropinski AM, Turner D, Tolstoy I, Moraru C, Adriaenssens EM, Mahony J (2022) Create one new family (*Aliceevansviridae*) with one new genus (*Vansinderenvirus*) and two existing genera (*Moineavirus* and *Brussowvirus*) (*Caudoviricetes*). <https://ictv.global/ictv/proposals/2022.001B.Aliceevansviridae.zip>
55. Laanto E, Mäntynen S, Sundberg L-R, Poranen MM, Oksanen HM (2022) Create a new class Ainoaviricetes and a new order *Lautamovirales* in the phylum *Preplasmiviricota* (Realm *Varidnaviria*, kingdom *Bamfordvirae*), for single-stranded DNA viruses encoding vertical double jelly roll major capsid proteins https://ictv.global/ictv/proposals/2022.002B.Ainoaviricetes_Finnlakeviridae_nc.zip
56. Turner D, Tolstoy I, Kropinski AM (2022) To abolish the genus *Haartmanvirus*, and transfer its single species to the genus *Epseptimavirus* (*Caudoviricetes: Demerecviridae*). https://ictv.global/ictv/proposals/2022.003B.Abolish_Haartmanvirus.zip
57. Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Create ten new species in the genus *Alexandravirus* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.004B.Alexandravirus_10nsp.zip
58. Barylski J, Turner D, Moraru C, Kropinski AM (2022) Create two subfamilies (*Andregratiavirinae* and *Joanriponvirinae*) and seven new genera (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.005B.Andregratiavirinae_Joanriponvirinae_nsf.zip
59. Lood C, Lavigne R, Turner D, Moraru C, Adriaenssens EM, Kropinski AM, Drulis-Kawa Z (2022) Create a new family (*Arenbergviridae*) and a new genus (*Wroclawvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.006B.Arenbergviridae_nf.zip
60. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Arvduovirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.007B.Arduovirus_ng.zip
61. Imklin N, Nasanit R (2022) Create one new species in the genus *Berlinvirus* (*Autographiviridae*) and one new species in the genus *Epseptimavirus* (*Demerecviridae*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.008B.Autographiviridae_2nsp.zip
62. McCutcheon JG, Lin A, Dennis JJ (2022) Create a new genus (*Axeltrivirus*) containing one species in the class *Caudoviricetes* https://ictv.global/ictv/proposals/2022.009B.Axeltrivirus_ng.zip

63. Kurtböke I, Turner D, Moraru C, Adriaenssens EM, Kropinski AM (2022) Create a new subfamily (*Azeevirinae*) with four genera (*Liebevirus*, *Yangvirus*, *Manhattanvirus* and *Galvestonvirus*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.010B.Azeevirinae_nsf.zip
64. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Baileybluvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.011B.Baileybluevirus_ng.zip
65. Tong Y, Turner D, Moraru C, Adriaenssens EM, Kropinski AM (2022) Create a new subfamily (*Beaumontvirinae*) containing three genera (*Bixivirus*, *Salvavirus* and *Siaravirus*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.012B.Beaumontvirinae_nsf.zip
66. Dong Y, Liang Y, Wang M (2022) Create one new genus (*Bocovirus*) including one new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.013B.Bocovirus_ng.zip
67. Millard A, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Branisovskavirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.014B.Branisovskavirus_ng.zip
68. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Cantarevirus*) with a single species (*Caudoviricetes*). https://ictv.global/ictv/proposals/2022.015B.Cantarevirus_ng.zip
69. Hynes A, Turner D, Kropinski AM, Lang A (2022) Create a new genus (*Capnelvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.016B.Capnelvirus_ng.zip
70. Britton AP, Visser KA, Zhang P, Wassink H, Doerksen TA, Ongena V, Manocha C, Lynch KH, van Belkum MJ, Dennis JJ, Yang X, Claessen D, Briegel A, Martin-Visscher LA (2022) Create a new genus (*Carnodivirus*) containing two new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.017B.Carnodivirus_ng.zip
71. Sousa JC, Sillankorva S, Faustino A, Carvalho CM (2022) Create a new genus in the *Caudoviricetes* class containing Klebsiella phage vB_KpnS-Carvaje https://ictv.global/ictv/proposals/2022.018B.Carvajevirus_ng.zip
72. Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Add sixteen (16) species to the genus *Casadabanvirus* (*Caudoviricetes*). https://ictv.global/ictv/proposals/2022.019B.Casadabanvirus_16nsp.zip
73. Imklin N, Sriprasong P, Nasanit R (2022) Create one new species in the genus *Teetrevirus* (*Autographiviridae*) and one new species in the genus *Felixounavirus* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.020B.Caudoviricetes_2nsp.zip
74. Grami E, Saidi N (2022) Create one new genus (*Certevirus*) including one new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.021B.Certevirus_ng.zip
75. Li J-Q (2022) Create a new genus (*Chaoshanvirus*) including a new species (*Chaoshanvirus ZPAH34*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.022B.Chaoshanvirus_ng.zip
76. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Chidieberevirus*) with two new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.023B.Chidieberevirus_ng.zip
77. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Clawzvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.024B.Clawzvirus_ng.zip
78. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Cobrasixvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.025B.Cobrasixvirus_ng.zip
79. Łobocka M, Stefańczyk E, Adriaenssens EM, Kropinski AM, Turner D (2022) Create one new species in the genus *Copernicivirus*, subfamily *Sarlesvirinae* (*Caudoviricetes*: *Rountreeviridae*) https://ictv.global/ictv/proposals/2022.026B.Copernicivirus_1nsp.zip
80. Turner D, Kropinski AM (2022) Create a new genus (*Craquatro-virus*) with two species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.027B.Craquatrovirus_ng.zip
81. Turner D, Moraru C, Tolstoy I, Adriaenssens EM, Kropinski AM (2022) Create a new subfamily of *Gordonia* phages (*Deeyouvirinae*) with two genera (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.028B.Deeyouvirinae_nsf.zip
82. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Eowynvirus*) with species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.029B.Eowynvirus_ng.zip
83. Adriaenssens EM, Turner D (2022) Error correction (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.030B.Error_correction.zip

84. Millard A, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Ferozepurvirus*) with two species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.031B.Ferozepurvirus_ng.zip
85. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create five new genera of *Gordonia* siphophages (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.032B.Caudoviricetes_5ng.zip
86. Turner D, Guarneros G, Moraru C, Adriaenssens EM, Kropinski AM (2022) Create a new family (*Fredfastierviridae*) with a single genus (*Jamesmcgillvirus*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.033B.Fredfastierviridae_nf.zip
87. Moraru C, Tong Y, Mahadevan P, Adriaenssens EM, Kropinski AM, Turner D (2022) Create a new subfamily (*Gordonclarkvirinae*) with three genera (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.034B.Gordonclarkvirinae_nsf.zip
88. Moraru C, Tong Y, Tian F, Mahadevan P, Adriaenssens EM, Kropinski AM, Turner D (2022) Create a new family (*Grimontviridae*) with five genera (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.035B.Grimontviridae_nf.zip
89. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Hiroshimavirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.036B.Hiroshimavirus_ng.zip
90. Li J-Q (2022) Create a new genus (*Hzaivirus*) in the family *Guelinviridae* including a new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.037B.Hzaivirus_ng.zip
91. Turner D, Kropinski AM (2022) Create a new genus (*Iggyvirus*) with a two species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.038B.Iggyvirus_ng.zip
92. Turner D, Moraru C, Adriaenssens EM, Kropinski AM (2022) Create a new subfamily (*Iiscvirinae*), with one existing genus (*Jilinivirus*) and one new genus (*Aryavirus*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.039B.Iiscvirinae_nsf.zip
93. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Ittyvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.040B.Ittyvirus_ng.zip
94. Ongena V, Rozen DE, Briegel A, Claessen D, Kropinski AM. (2022) Create one new species in the genus *Janusvirus* (*Caudoviricetes: Arquatrovirinae*) https://ictv.global/ictv/proposals/2022.041B.Janusvirus_1nsp.zip
95. Millard A, Turner D, Moraru C, Adriaenssens EM, Kropinski AM (2022) Create a new family (*Kleczkowskaviridae*) with a single genus (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.042B.Kleczkowskaviridae_nf.zip
96. Millard A, Puxty R, Nicholas M. (2022) Creation of seven new genera within the family *Kyanoviridae* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.043B.Kyanoviridae_7ng.zip
97. Millard A, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Ludhianavirus*) with three species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.044B.Ludhianavirus_ng.zip
98. Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Maaswegvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.045B.Maaswegvirus_ng.zip
99. Turner D, Moraru C, Kropinski AM (2022) Create two new genera of *Burkholderia* phages (*Magiavirus* and *Bigmanorsvirus*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.046B.Caudoviricetes_2ng.zip
100. Wang Z, Liang Y, Wang M (2022) Create one new genus (*Mare-flavirus*) including one new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.047B.Mareflavirus_ng.zip
101. Millard A, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Meadowvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.048B.Meadowvirus_ng.zip
102. Vázquez-Campos X, Damnjanovi D (2022) Create one new species in the genus *Menderavirus* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.049B.Menderavirus_1nsp.zip
103. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Miamivirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.050B.Miamivirus_ng.zip
104. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Midgardsormrvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.051B.Midgardsormrvirus_ng.zip
105. Seed K, Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Mohonavirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.052B.Mohonavirus_ng.zip

106. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Mollymurvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.053B.Mollymurvirus_ng.zip
107. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create ten new species in the genus *Mudcatvirus* and rename two species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.054B.Mudcatvirus_10nsp.zip
108. Li J-Q (2022) Create a new genus (*Nanhuvirus*) in the family *Straboviridae* including a new species *Nanhuvirus LPCS28* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.055B.Nanhuvirus_ng.zip
109. Millard A, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Nimduovirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.056B.Nimduovirus_ng.zip
110. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Northamptonvirus*) with two new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.057B.Northamptonvirus_ng.zip
111. Hammerl J-A, Turner D, Moraru C, Kropinski AM (2022) Create three new genera of *Ochrobactrum* phages each with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.058B.Caudoviricetes_3ng.zip
112. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Paclarkvirus*) with twelve species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.060B.Packlarkvirus_ng.zip
113. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Pavtokvirus*) with two species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.061B.Pavtokvirus_ng.zip
114. Lueder MR, Van Zyl LJ, Adriaenssens EM (2022) Create 6 new genera and 19 new species to the family *Peduviridae* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.062B.Peduviridae_6ng_19nsp.zip
115. Mahony J, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Piorkowskivirus*) with seven species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.063B.Piorkowskivirus_ng.zip
116. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Ponsvirus*) with seven species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.064B.Ponsvirus_ng.zip
117. Mazur A, Millard A, Turner D, Moraru C, Adriaenssens EM, Kropinski AM, Gonzalez V (2022) Create a new family (*Pootjesviridae*) with one subfamily and five genera (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.065B.Pootjesviridae_nf.zip
118. Millard A, Łobocka M, Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Create five new genera of *Pseudomonas* jumbo phages (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.066B.Caudoviricetes_6ng.zip
119. Vidigal PMP, Hungaro HM, Gontijo MTP, Lopez MES (2022) Create a new genus (*Purivirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.067B.Purivirus_ng.zip
120. Łobocka M, Stefańczyk E, Adriaenssens EM, Kropinski AM, Turner D (2022) Create one new species in the genus *Rosenblum-virus* and two new species in the genus *Andhravirus* of *Rakieten-virinae* subfamily (*Caudoviricetes*: Rountreeviridae) https://ictv.global/ictv/proposals/2022.068B.Rakietenvirinae_3nsp.zip
121. Kurtböke I, Turner D, Moraru C, Adriaenssens EM, Kropinski AM (2022) Create a new, single species, genus (*Quivirus*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.069B.Quivirus_ng.zip
122. Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Rivsvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.070B.Rivsvirus_ng.zip
123. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Roslyckvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.071B.Roslyckvirus_ng.zip
124. Turner D, Kropinski AM (2022) Create a new genus (*Scappvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.072B.Scappvirus_ng.zip
125. Wittmann J, Adriaenssens EM, Turner D, (2022) Create one new subfamily, nine new genera and 30 new species in the family *Schitoviridae* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.073B.Schitoviridae_Insf_9ng_30nsp.zip

126. Li J-Q (2022) Create a new species (*Segzyvirus LPSTLL*), and assign it to the genus *Segzyvirus* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.074B.Segzyvirus_1nsp.zip
127. Barylski J, Turner D, Moraru C, Kropinski AM (2022) Create a new subfamily (*Sejongvirinae*) and two new genera (*Basilisk-virus* and *Yihwangvirus*) (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.075B.Sejongvirinae_nsf.zip
128. Li J-Q (2022) Create a new genus *Shantouvirus* in the family *Chaseviridae* including a new species *Shantouvirus ZPAH14* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.076B.Shantouvirus_ng.zip
129. Rong C-H, Yang Y-L, Zhang Y (2022) Create one new genus (*Shenzhenvirus*) including one new species (*Caudoviricetes: Kyenoviridae*) https://ictv.global/ictv/proposals/2022.077B.Kyanoviridae_ing.zip
130. Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Siatvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.078B.Siatvirus_ng.zip
131. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Silentrexvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.079B.Silentrexvirus_ng.zip
132. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create six new genera for *Arthrobacter* phages (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.080B.Caudoviricetes_6ng.zip
133. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create six new genera of *Streptomyces* phages (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.081B.Caudoviricetes_6ng_streptomyces.zip
134. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Skulduggeryvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.082B.Skulduggeryvirus_ng.zip
135. Tolstoy I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Snuvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.083B.Snuvirus_ng.zip
136. Kurtböke I, Turner D, Moraru C, Adriaenssens EM, Kropinski AM (2022) Create six new genera and 33 new species of *Gordonia* siphoviruses (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.084B.Caudoviricetes_6ng_33nsp.zip
137. Kurtböke I, Moraru C, Adriaenssens EM, Kropinski AM, Turner D (2022) Create a new family (*Stanwilliamsviridae*) with two subfamilies (*Boydwoodruffvirinae* & *Loccivirinae*) and nine (9) genera (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.085B.Stanwilliamsviridae_nf_2nsf_4ng_6nsp.zip
138. Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Stonewallvirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.086B.Stonewallvirus_ng.zip
139. Millard A, Puxty R (2022) Creation of new genera and species in the family *Straboviridae* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.087B.Straboviridae_update.zip
140. Zheng H, Liu B, Xu Y, Zhang Z, Man H, Liu J, Chen F. (2022) Create one new genus (*Syrbvirus*) including one new species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.088B.Syrbvirus_ng.zip
141. Turner D, Moraru C, Kropinski AM (2022) Create three new single species genera (*Seahorsevirus*, *Enfavirus*, *Tieomvirus*) of *Vibrio* phages (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.089B.Caudoviricetes_3ng_vibrio.zip
142. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create three new genera (*Kumottavirus*, *Sargevirus*, *Shoyavirus*) for *Arthrobacter* siphoviruses (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.090B.Caudoviricetes_3ng_arthrobacter.zip
143. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create three new genera of actinophages (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.091B.Caudoviricetes_3ng_actinophages.zip
144. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create three new genera of lytic *Gordonia* phages (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.092B.Caudoviricetes_3ng_gordonia.zip
145. Kurtböke I, Turner D, Moraru C, Kropinski AM (2022) Create a new genus (*Wollypogirus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.093B.Wollypogirus_ng.zip

146. Turner D, Kropinski AM (2022) Create a new genus (*Yancheng-virus*) with a single species (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.094B.Yanchengvirus_ng.zip
147. Wang Jing, Liu Zekun, Huang Shixuan (2022) Create**** one new genus (*Youngvirus*) including one new species in the *Autographiviridae* (*Caudoviricetes*) https://ictv.global/ictv/proposals/2022.095B.Youngvirus_ng.zip
148. Tian F, Li J, Tong Y (2022) Create a new genus (*Zhangqianvirus*) in the class *Caudoviricetes* https://ictv.global/ictv/proposals/2022.096B.Zhangqianvirus_ng.zip
149. Kotta-Loizou I, Wu CF, Moriyama H, Coutts RHA (2022) Create a new family (*Alternaviridae*) accommodating one new genus (*Alternavirus*) and five new species https://ictv.global/ictv/proposals/2022.001F.Alternaviridae_newfam.zip
150. Varsani A, Krupovic M (2022) Establishment of 4 new genera, 13 new species and renaming 9 species in the family *Bacilladnaviridae* https://ictv.global/ictv/proposals/2022.002F.Bacilladnaviridae_reorg.zip
151. Ayllón MA, Turina M, Jiang D, Xie J, Marzano SY, Donaire L, Nerva L, Sabanadzovic S (2022) Create 15 new species in the family *Botourmiaviridae* https://ictv.global/ictv/proposals/2022.003F.Botourmiaviridae_15nsp.zip
152. Aylward FO, Abrahão J, Brussaard C, Fischer MG, Moniruzzaman M, Ogata H, Suttle CA (2022) Create 3 new families, 3 subfamilies, 13 genera, and 20 new species within the order *Imitervirales* (phylum *Nucleocyotiviricota*) and rename two existing species. https://ictv.global/ictv/proposals/2022.004F.Imitervirales_reorg.zip
153. Zhang R, Takemura M, Murata K, Ogata H (2022) Create a new family (*Mamonoviridae*), a genus (*Medusavirus*), and two species (*Medusavirus medusae* and *Medusavirus sthenus*) in the phylum *Nucleocyotiviricota* https://ictv.global/ictv/proposals/2022.005F.Mamonoviridae_newfam.zip
154. Kogay R, Koppenhöfer S, Beatty JT, Kuhn JH, Lang AS, Zhaxy-bayeva O (2022) Classification of gene transfer agents (GTAs) as viriforms https://ictv.global/ictv/proposals/2022.001G.GTA_viriforms.zip
155. Candresse T, Blouin A, Cao M, Cho WK, Constable F, Mollov D, Nagata T, Sabanadzovic S, Saldarelli P, Tzanetakakis I, Villamor DE (2022) Create 12 new species (*Tymovirales: Betaflexiviridae*) https://ictv.global/ictv/proposals/2022.001P.Betaflexiviridae_12ns.zip
156. Tang J, Delmiglio C, Ward L, Thompson J (2022) Create one new species (*Waikavirus rosae*) in the genus *Waikavirus* (*Picornavirales: Secoviridae*) https://ictv.global/ictv/proposals/2022.003P.Secoviridae_1ns.zip
157. Fuchs M, Hily J-M, Petrzik K, Sanfaçon H, Thompson J, van der Vlugt R, Wetzel T (2022) Create eight new species (*Picornavirales: Secoviridae*) https://ictv.global/ictv/proposals/2022.004P.Secoviridae_8ns.zip
158. Fuchs M, Hily J-M, Petrzik K, Sanfaçon H, Postler T, Thompson J, van der Vlugt R, Wetzel T (2022) Rename all existing species to comply with the newly ICTV-mandated binomial species format (*Picornavirales: Secoviridae*) https://ictv.global/ictv/proposals/2022.005P.Secoviridae_rename.zip
159. Sabanadzovic S, Nibert ML, Tzanetakakis IE, Valverde R (2022) Rename species in the family *Amalgaviridae* to comply with ICTV-mandated binomial format (*Durnavirales: Amalgaviridae*) https://ictv.global/ictv/proposals/2022.006P.Amalgaviridae_rename.zip
160. Teycheney P-Y, UMBER M (2022) Create four new species in the family *Caulimoviridae* https://ictv.global/ictv/proposals/2022.007P.Caulimoviridae_4ns.zip
161. Teycheney P-Y, Geering ADW, Dasgupta I, Hull R, Kreuze JF, Lockhart B, Muller E, Pappu H, Pooggin MM, Richert-Pöggeler KR, Schoelz JE, Seal S, Stovolone L, UMBER M (2022) Rename all species in family *Caulimoviridae* to comply with binomial species format https://ictv.global/ictv/proposals/2022.008P.Caulimoviridae_rename.zip
162. Silva JPH, Silva JCF, Bejerman N, Zerbini FM (2022) Create a new family, *Amesuviridae*, in the order *Mulpavirales*, including two genera, *Temfrudevirus* and *Yermavirus*, each with one species https://ictv.global/ictv/proposals/2022.009P.Amesuviridae_nf.zip
163. Inoue-Nagata AK, Wylie SJ, Jordan R, Kreuze JF, Li F, Lopez-Moya JJ, Makinen K, Ohshima K (2022) Create six new species in the genus *Potyvirus* and one in the genus *Macluravirus* (*Patatavirales: Potyviridae*) https://ictv.global/ictv/proposals/2022.010P.Potyviridae_7ns.zip

164. Adkins S, Turina M, Whitfield A, Resende R, Naidu R, Hughes H, Kuhn J, Postler T, Rubino L (2022) Rename all existing species to comply with the binomial species format (*Bunyavirales: Tospoviridae*) https://ictv.global/ictv/proposals/2022.011P.Tospoviridae_rename.zip
165. Hammond RW, Abrahamian P, Haenni A-L, Molloy D, Nagata T, Sabanadzovic S (2022) Create two new species in the genus *Tymovirus* and one new species in the genus *Marafivirus* (*Tymovirales:Tymoviridae*) https://ictv.global/ictv/proposals/2022.012P.Tymoviridae_3nsp.zip
166. Sabanadzovic S, Hammond RW, Molloy D, Nagata T, Haenni A-L, Abrahamian P, Aboughanem-Sabanadzovic N, Rubino L (2022) Rename 40 species in the family *Tymoviridae* to comply with binomial format (*Tymovirales: Tymoviridae*) https://ictv.global/ictv/proposals/2022.013P.Tymoviridae_rename.zip
167. Scheets K, Miller WA (2022) Assign the genus *Luteovirus* to the subfamily *Regressovirinae* in the family *Tombusviridae* (*Tolivirales*) https://ictv.global/ictv/proposals/2022.014P.Luteovirus_move.zip
168. Scheets K, Hernandez C, Jordan R, Miller WA, Rubino L, White KA (2022) Rename all existing species assigned to genera in the family *Tombusviridae* (*Tolivirales*) to comply with the binomial species format https://ictv.global/ictv/proposals/2022.015P.Tombusviridae_rename.zip
169. Ramos-González PL, Freitas-Astúa J, Li J-M, Peters J, Rodrigues JC, Roy A, Melzer M (2022) Create three new species in the genus *Cilevirus*, family *Kitaviridae* (*Martellivirales*) https://ictv.global/ictv/proposals/2022.016P.Cilevirus_3ns.zip
170. Ramos-González PL, Freitas-Astúa J, Li J-M, Peters J, Rodrigues JC, Roy A, Melzer M (2022) Rename existing species in the family *Kitaviridae* (*Martellivirales*) to comply with binomial format https://ictv.global/ictv/proposals/2022.017P.Kitaviridae_rename.zip
171. Sidharthan VK, Chaturvedi KK, Baranwal VK (2022) Create one new species (*Emaravirus visci*) in the genus *Emaravirus*, family *Fimoviridae* https://ictv.global/ictv/proposals/2022.018P.Emaravirus_1ns.zip
172. Gaskin TR, Tischendorf M, Günther I, Rehanek M, Büttner C, von Bargen S (2022) Create *Emaravirus fraxini* as a new species in the genus *Emaravirus*, family *Fimoviridae* https://ictv.global/ictv/proposals/2022.019P.Emaravirus_1ns.zip
173. Nabeshima T, Abe J (2022) Create *Emaravirus vitis* as a new species in the genus *Emaravirus*, family *Fimoviridae* https://ictv.global/ictv/proposals/2022.020P.Emaravirus_1ns.zip
174. Shimomoto Y, Okada T, Ikeda K, Tatara A, Hasegawa Y, Yanagisawa H, Takeyama S, Hayashi K, Yano K, Morita Y, Kubota K (2022) Create *Emaravirus illicii* as a new species in the genus *Emaravirus*, family *Fimoviridae* https://ictv.global/ictv/proposals/2022.021P.Emaravirus_1ns.zip
175. Rabbidge LO, Blouin AG, Chooi KM, Higgins CM, MacDiarmid RM (2022) Create *Emaravirus corynocarpi* as a new species in the genus *Emaravirus*, family *Fimoviridae* https://ictv.global/ictv/proposals/2022.022P.Emaravirus_1ns.zip

Table 1

Summary of taxonomic changes approved by the ICTV in 2023

Rank	MSL #37 Total^a	New	Abolished	Moved	Renamed	MSL #38 Total^b
Realm	6	0	0	0	0	6
Subrealm	0	0	0	0	0	0
Kingdom	10	0	0	0	0	10
Subkingdom	0	0	0	0	0	0
Phylum	17	0	0	0	0	17
Subphylum	2	0	0	0	0	2
Class	39	1	0	0	0	40
Subclass	0	0	0	0	0	0
Order	65	7	0	0	0	72
Suborder	8	0	0	0	0	8
Family	233	31	0	1	1	264
Subfamily	168	14	0	1	0	182
Genus	2,606	214	2	15	12	2,818
Subgenus	84	0	0	0	0	84
Species	10,434	858	19	6	1,643	11,273

^aTotal number of taxa in the ICTV Master Species List prior to 2023 ratification^bTotal number of taxa now recognized, as reported in the ICTV Master Species List #38

Table 2

New classes, orders, and families ratified by the ICTV in 2023

Lineage	Taxon history page
New class	
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Preplasmiviricota</i> › <i>Ainoaviricetes</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214454
New orders	
<i>Adnaviria</i> › <i>Zilligvirae</i> › <i>Taleaviricota</i> › <i>Tokiviricetes</i> › <i>Maximonvirales</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214278
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Juravirales</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214312
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Magrovirales</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214313
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Nakonvirales</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214277
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Preplasmiviricota</i> › <i>Ainoaviricetes</i> › <i>Lautamovirales</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214455
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Preplasmiviricota</i> › <i>Tectiliviricetes</i> › <i>Atroposvirales</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214301
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Preplasmiviricota</i> › <i>Tectiliviricetes</i> › <i>Coyopavirales</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214279
New families	
<i>Adnaviria</i> › <i>Zilligvirae</i> › <i>Taleaviricota</i> › <i>Tokiviricetes</i> › <i>Maximonvirales</i> › <i>Ahmunviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214283
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Aliceevansviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214336
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Arenbergviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214487
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Fervensviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214327
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Fredfastierviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214595
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Grimontviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214614
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Kleczkowskaviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214640
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Pootjesviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214761
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Pungoviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214328
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Speroviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214329
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Stanwilliamsviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214925
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Verdandiviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214302
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Juravirales</i> › <i>Yangangviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214315
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Juravirales</i> › <i>Yanlukaviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214314
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Magrovirales</i> › <i>Aoguangviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214316
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Nakonvirales</i> › <i>Ahpuchviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214280

Lineage	Taxon history page
<i>Duplodnaviria</i> › <i>Heunggongvirae</i> › <i>Uroviricota</i> › <i>Caudoviricetes</i> › <i>Nakonavirales</i> › <i>Ekchuahviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214281
<i>Monodnaviria</i> › <i>Shotokuvirae</i> › <i>Cressdnaviricota</i> › <i>Arfiviricetes</i> › <i>Mulpavirales</i> › <i>Amesuviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215103
<i>Riboviria</i> › <i>Orthornavirae</i> › <i>Duplornaviricota</i> › <i>Chrymotiviricetes</i> › <i>Ghabrivirales</i> › <i>Alternaviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214981
<i>Riboviria</i> › <i>Orthornavirae</i> › <i>Negarnaviricota</i> › <i>Tosoviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214178
<i>Riboviria</i> › <i>Orthornavirae</i> › <i>Pisuviricota</i> › <i>Pisoniviricetes</i> › <i>Picomavirales</i> › <i>Noraviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214001
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Nucleocytoviricota</i> › <i>Megaviricetes</i> › <i>Mamonoviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215059
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Nucleocytoviricota</i> › <i>Megaviricetes</i> › <i>Imitervirales</i> › <i>Allomimiviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215020
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Nucleocytoviricota</i> › <i>Megaviricetes</i> › <i>Imitervirales</i> › <i>Mesomimiviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215021
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Nucleocytoviricota</i> › <i>Megaviricetes</i> › <i>Imitervirales</i> › <i>Schizomimiviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215022
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Preplasmiviricota</i> › <i>Tectiliviricetes</i> › <i>Atroposvirales</i> › <i>Skuldviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214303
<i>Varidnaviria</i> › <i>Bamfordvirae</i> › <i>Preplasmiviricota</i> › <i>Tectiliviricetes</i> › <i>Coyopavirales</i> › <i>Chaacviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214284
<i>Itzamnaviridae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202214282
<i>Bartogtaviriformidae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215064
<i>Brachytaviriformidae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215065
<i>Rhodogtaviriformidae</i>	https://ictv.global/taxonomy/taxondetails?taxnode_id=202215063