

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

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| **Code assigned:** | **2022.009D** |  |
| **Short title:** Establishing 48 new species and renaming 101 species in the family *Circoviridae* | | |
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**List the ICTV Study Group(s) that have seen this proposal**

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| *Circoviridae* Study Group |

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

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| All who responded in agreement including a non-study group member (Roumagnac P) who is a author on this TP. |

**ICTV Study Group votes on proposal**

|  |  |  |  |
| --- | --- | --- | --- |
| **Study Group** | **Number of members** | | |
| **Votes support** | **Votes against** | **No vote** |
| *Circoviridae* Study Group | 8 | 0 | 2 |
|  |  |  |  |

**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 | 25 May 2022 |
| 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**

|  |
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| 2022.009D.N.v2Circoviridae\_101rensp\_48nsp.xlsx |

**Abstract**

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| Circoviruses are small viruses with circular single-stranded DNA genomes that are classified within two genera, *Circovirus* and *Cyclovirus*, in the family *Circoviridae* (phylum *Cressdnaviricota*, class *Arfiviricetes*, order *Circlivirales*). During the last two years, a number of new circoviruses have been identified and 48 new species need to be established for their classification. The classification is based on the guidelines set forward, i.e., 80% genome-wide pairwise identity species threshold for member of the family *Circoviridae.* Further, we rename 101 currently established species to binomial format with a freeform epithet. |

**Text of proposal**

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| --- | --- |
| |  | | --- | | In the family *Circoviridae* (phylum *Cressdnaviricota,* class *Arfiviricetes* order *Circlivirales*), there are two established genera, *Circovirus* and *Cyclovirus*. Viruses within these two genera are classified into species based on genome-wide pairwise identities with 80% species demarcation threshold [1].  Over the last two years, a significant number of circovirus genomes have been identified from various organisms or their fecal samples. Based on the analysis of the genome-wide pairwise identities coupled with phylogenetic support, we propose the creation of 48 new species (11 in the genus *Circovirus* and 37 in the genus *Cyclovirus*) to classify these new circoviruses (summarized in Table 1). The proposed classification is also supported by phylogenetic analysis of the genome nucleotide sequences as well as analysis of the pairwise nucleotide sequence identities (Figure 1-4).  With an aim to comply with the mandated binomial species naming format [2], we have renamed the current species (n=101) in the family *Circoviridae* using binomial nomenclature with a freeform epithet. All epithets are either derivatives of host species or isolation source using names in different languages of peoples that inhabit that region where possible (Table 1). In cases where hosts are known and the viruses were experimentally studied, in order to have minimal disruption, we have used common names for the hosts. In the case of the species *Porcine circovirus 1, Porcine circovirus 2, Porcine circovirus 3* and *Porcine circovirus 4* we have additionally used an alphanumeric epithet to name them as *Circovirus porcine1*, *Circovirus porcine2*, *Circovirus porcine3* and *Circovirus porcine4*. Notes on species naming are provided in Table 2. | |

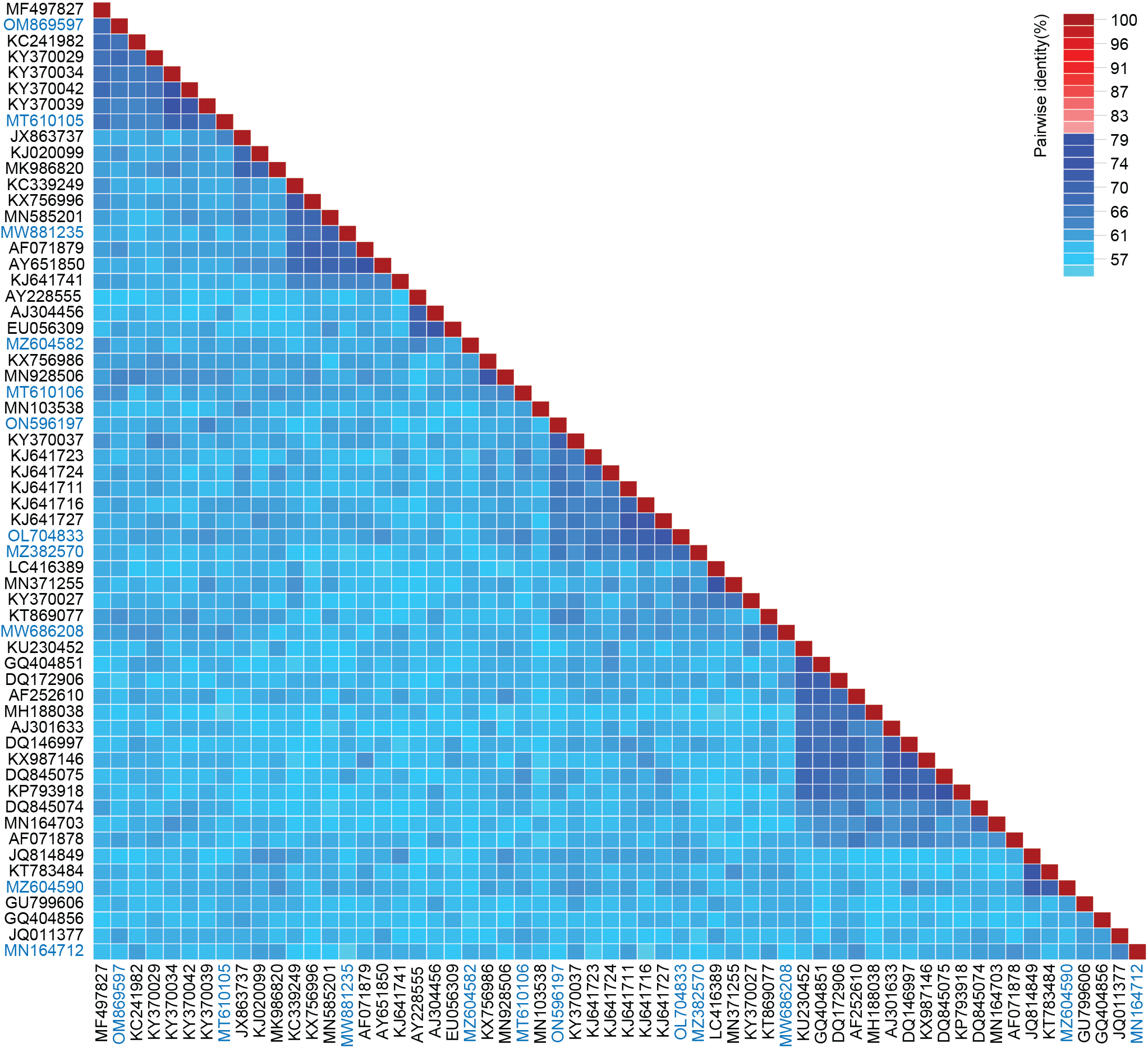
**Supporting evidence**

**Table 1:** Summary of the taxonomy of currently classified circoviruses with new binomial species names provided in blue font.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Accession** | **Virus name** | **Host /source** | **Country** | **Current species** | **New species name** | **Epithet notes** |
| GU799606 | barbel circovirus | *Barbus barbus* | Hungary | *Barbel circovirus* | *Circovirus barbel* | common name for host |
| JX863737 | bat associated circovirus 1 | *Rhinolophus ferrumequinum* | Myanmar | *Bat associated circovirus 1* | *Circovirus chauvesouris* | bat in French (2 words) |
| KC339249 | bat associated circovirus 2 | *Rhinolophus ferrumequinum* | Myanmar | *Bat associated circovirus 2* | *Circovirus vleermuis* | bat in Dutch |
| JQ814849 | Rhinolophus ferrumequinum circovirus 1 | *Rhinolophus ferrumequinum* | China | *Bat associated circovirus 3* | *Circovirus bianfu* | bat in Chinese |
| KT783484 | Tadarida brasiliensis circovirus 1 | *Tadarida brasiliensis* | Brazil | *Bat associated circovirus 4* | *Circovirus bastao* | bat in Portuguese |
| KJ641727 | bat associated circovirus 5 | *Plecotus auritus* | China | *Bat associated circovirus 5* | *Circovirus saguzarra* | bat in Basque |
| KJ641724 | bat associated circovirus 6 | *Rhinolophus affinis* | China | *Bat associated circovirus 6* | *Circovirus ratpenat* | bat in Catalan |
| KJ641723 | bat associated circovirus 7 | *Rhinolophus sinicus* | China | *Bat associated circovirus 7* | *Circovirus lepakko* | bat in Finnish |
| KJ641711 | bat associated circovirus 8 | *Myotis ricketti* | China | *Bat associated circovirus 8* | *Circovirus morcego* | bat in Galician |
| KJ641741 | bat associated circovirus 9 | *Rhinolophus ferrumequinum* | China | *Bat associated circovirus 9* | *Circovirus kelawar* | bat in Malay |
| KX756986 | bat circovirus Acheng30 | *Vespertilio sinensis* | China | *Bat associated circovirus 10* | *Circovirus ialtag* | bat in Scottish |
| KX756996 | bat circovirus Mengyuan2 | *Hipposideros armiger* | China | *Bat associated circovirus 11* | *Circovirus siksparnis* | bat in Latvian |
| KJ641716 | bat circovirus CV/GD2012 | *Pipistrellus sp.* | China | *Bat associated circovirus 12* | *Circovirus cia* | bat in Lao |
| MN928506 | bat circovirus Sardinia | *Miniopterus schreibersii* | Italy | *Bat associated circovirus 13* | *Circovirus pipistrello* | bat in Italian |
| AF071878 | beak and feather disease virus | *Psittaciformes species* | USA | *Beak and feather disease virus* | *Circovirus parrot* | common name for host |
| MN371255 | Ursus americanus circovirus | *Ursus americanus americanus* | USA | *Bear circovirus* | *Circovirus bear* | common name for host |
| AJ301633 | canary circovirus | *Serinus canaria* | Italy | *Canary circovirus* | *Circovirus canary* | common name for host |
| KC241982 | canine circovirus | *Canis lupus familiaris* | USA | *Canine circovirus* | *Circovirus canine* | common name for host |
| GQ404851 | chimpanzee stool avian-like circovirus | *Pan troglodytes* | Rwanda | *Chimpanzee associated circovirus 1* | *Circovirus impundu* | chimpanzee in Kinyarwanda |
| LC416389 | Paguma larvata circovirus | *Paguma larvata* | Japan | *Civet circovirus* | *Circovirus civet* | common name for host |
| AY228555 | mulard duck circovirus | *Anas domesticus* | USA | *Duck circovirus* | *Circovirus duck* | common name for host |
| MN585201 | elk circovirus | *Cervus canadensis* | Canada | *Elk circovirus* | *Circovirus elk* | common name for host |
| JQ011377 | Silurus glanis circovirus | *Silurus glanis* | Hungary | *European catfish circovirus* | *Circovirus catfish* | common name for host |
| DQ845075 | finch circovirus | *Chloebia gouldiae* |  | *Finch circovirus* | *Circovirus finch* | common name for host |
| AJ304456 | goose circovirus | *Goose* | Germany | *Goose circovirus* | *Circovirus goose* | common name for host |
| DQ845074 | gull circovirus | *Larus argentatus* | Sweden | *Gull circovirus* | *Circovirus gull* | common name for host |
| GQ404856 | human stool-associated circular virus | *Homo sapiens* | Nigeria | *Human associated circovirus 1* | *Circovirus eniyan* | human in Yoruba |
| KJ020099 | mink circovirus | *Mustela sp.* | China | *Mink circovirus* | *Circovirus mink* | common name for host |
| MH188038 | Culex circovirus-like virus | *Culex sp.* | USA | *Mosquito associated circovirus 1* | *Circovirus mossi* | common word for mosquito in USA |
| MN164703 | penguin circovirus | *Pygoscelis adeliae* | Antarctica | *Penguin circovirus* | *Circovirus penguin* | common name for host |
| AF252610 | Columbid circovirus | *Columbia livia* | Germany | *Pigeon circovirus* | *Circovirus pigeon* | common name for host |
| AF071879 | porcine circovirus 1 | *Sus scrofa domesticus* |  | *Porcine circovirus 1* | *Circovirus porcine1* | common name for host |
| AY651850 | porcine circovirus 2 | *Sus scrofa domesticus* | Canada | *Porcine circovirus 2* | *Circovirus porcine2* | common name for host |
| KT869077 | porcine circovirus 3 | *Sus scrofa domesticus* | USA | *Porcine circovirus 3* | *Circovirus porcine3* | common name for host |
| MK986820 | porcine circovirus 4 | *Sus scrofa domesticus* | China | *Porcine circovirus 4* | *Circovirus porcine4* | common name for host |
| DQ146997 | raven circovirus | *Corvus coronoides* | Australia | *Raven circovirus* | *Circovirus raven* | common name for host |
| KY370034 | rodent circovirus 1 | *Neodon clarkei* | China | *Rodent associated circovirus 1* | *Circovirus rongeur* | rodent in French |
| KY370042 | rodent circovirus 2 | *Apodemus chevrieri* | China | *Rodent associated circovirus 2* | *Circovirus kiore* | rodent in Māori |
| KY370039 | rodent circovirus 3 | *Neodon clarkei* | China | *Rodent associated circovirus 3* | *Circovirus roditore* | rodent in Italian |
| KY370029 | rodent circovirus 4 | *Allactaga sibirica* | China | *Rodent associated circovirus 4* | *Circovirus rosegador* | rodent in Catalan |
| KY370027 | rodent circovirus 5 | *Niviventer eha* | China | *Rodent associated circovirus 5* | *Circovirus gnaver* | rodent in Danish |
| KY370037 | rodent circovirus 6 | *Apodemus draco* | China | *Rodent associated circovirus 6* | *Circovirus daga* | rodent in Filipino |
| MF497827 | bamboo rat circovirus | *Rhizomys pruinosus* | China | *Rodent associated circovirus 7* | *Circovirus gryzon* | rodent in Polish |
| DQ172906 | starling circovirus | *Sturnus vulgaris* | Spain | *Starling circovirus* | *Circovirus starling* | common name for host |
| EU056309 | Cygnus olor circovirus | *Cygnus olor* | Germany | *Swan circovirus* | *Circovirus swan* | common name for host |
| KU230452 | avian-like circovirus | *Ixodes scapulari* | USA | *Tick associated circovirus 1* | *Circovirus yaa* | tick in Navajo |
| KX987146 | tick circovirus 2 | *Ixodes crenulatus* | China | *Tick associated circovirus 2* | *Circovirus pichong* | tick in Chines (two words Pí chóng) |
| MN103538 | beaked whale circovirus | *Indopacetus pacificus* | USA | *Whale circovirus* | *Circovirus whale* | common name for host |
| KP793918 | zebra finch circovirus | *Taeniopygia guttata* | Germany | *Zebra finch circovirus* | *Circovirus zebrafinch* | common name for host |
| MH545511 | arboreal ant associated circular virus 1 | *Crematogaster nigriceps* | Kenya | *Ant associated cyclovirus 1* | *Cyclovirus mchwa* | Ant in Swahili |
| HM228874 | bat cyclovirus GF-4c | *Antrozous pallidus* | USA | *Bat associated cyclovirus 1* | *Cyclovirus jaaabani* | bat in Navajo |
| JF938079 | bat associated cyclovirus 2 | *Myotis spp.* | China | *Bat associated cyclovirus 2* | *Cyclovirus jemage* | bat in Hausa |
| JF938081 | bat associated cyclovirus 3 | *Myotis spp.* | China | *Bat associated cyclovirus 3* | *Cyclovirus kiroptero* | bat in Esperanto |
| JF938082 | bat associated cyclovirus 4 | *Myotis spp.* | China | *Bat associated cyclovirus 4* | *Cyclovirus sismis* | bat is Croatian |
| HQ738637 | cyclovirus bat CyCV-TB | *Tadarida brasiliensis* | USA | *Bat associated cyclovirus 5* | *Cyclovirus flagermus* | bat in Danish |
| KJ641712 | bat associated cyclovirus 6 | *Rhinolophus pusillus* | China | *Bat associated cyclovirus 6* | *Cyclovirus popo* | bat in Swahili |
| KJ641740 | bat associated cyclovirus 7 | *Rhinolophus pusillus* | China | *Bat associated cyclovirus 7* | *Cyclovirus liliac* | bat in Romanian |
| KJ641715 | bat associated cyclovirus 8 | *Rhinolophus pusillus* | China | *Bat associated cyclovirus 8* | *Cyclovirus nahkhiir* | bat in Estonian |
| KJ641720 | bat associated cyclovirus 9 | *Tylonycteris pachypus* | China | *Bat associated cyclovirus 9* | *Cyclovirus khangkhaw* | bat in Norwegian |
| KM382270 | Bat circovirus POA/2012/VI | *Molossus molossus,Tadarida brasiliensis* | Brazil | *Bat associated cyclovirus 10* | *Cyclovirus bastao* | bat in Portuguese |
| KJ641717 | bat associated cyclovirus 11 | *Myotis spp.* | China | *Bat associated cyclovirus 11* | *Cyclovirus yarasa* | bat in Uzbek |
| KM382269 | bat circovirus POA/2012/II | *Molossus molossus,Tadarida brasiliensis* | Brazil | *Bat associated cyclovirus 12* | *Cyclovirus doi* | bat in Vietnamese (originally two words) |
| KJ641728 | bat associated cyclovirus 13 | *Plecotus auritus* | China | *Bat associated cyclovirus 13* | *Cyclovirus nietoperz* | bat in Polish |
| KT732785 | Pacific flying fox associated cyclovirus-1 | *Pteropus tonganus* | Tonga | *Bat associated cyclovirus 14* | *Cyclovirus peka* | bat in Tongan |
| KT732786 | Pacific flying fox associated cyclovirus-2 | *Pteropus tonganus* | Tonga | *Bat associated cyclovirus 15* | *Cyclovirus pea* | bat in Samoan |
| KT732787 | Pacific flying fox associated cyclovirus-3 | *Pteropus tonganus* | Tonga | *Bat associated cyclovirus 16* | *Cyclovirus pekapeka* | bat in Māori |
| HQ738634 | cyclovirus PKbeef23/PAK/2009 | *Bos taurus* | Pakistan | *Bovine associated cyclovirus 1* | *Cyclovirus gaaye* | cow in Urdu |
| MK947371 | capybara associated cyclovirus 1 | *Hydrochoerus hydrochaeris* | Brazil | *Capybara associated cyclovirus* | *Cyclovirus roedor* | rodent in Portuguese |
| HQ738643 | cyclovirus NGchicken8/NGA/2009 | *Gallus gallus* | Nigeria | *Chicken associated cyclovirus 1* | *Cyclovirus adie* | chicken in Yoruba |
| MG846358 | chicken associated cyclovirus 2 | *Gallus gallus* | USA | *Chicken associated cyclovirus 2* | *Cyclovirus naahoohai* | chicken in Navajo |
| GQ404849 | Cyclovirus Chimp11 | *Pan troglodytes* | Central Africa | *Chimpanzee associated cyclovirus 1* | *Cyclovirus sokwe* | chimpanzee in Swahili |
| JX569794 | Florida woods cockroach cyclovirus | *Eurycotis floridana* | USA | *Cockroach associated cyclovirus 1* | *Cyclovirus roach* | common name for cockroach in USA |
| JX185419 | dragonfly cyclovirus 1 | *Pantala flavescens* | Tonga | *Dragonfly associated cyclovirus 1* | *Cyclovirus kisikisi* | dragonfly in Tongan |
| JX185422 | dragonfly cyclovirus 2 | *Pantala flavescens* | USA | *Dragonfly associated cyclovirus 2* | *Cyclovirus taniilai* | dragonfly in Navajo |
| JX185424 | dragonfly cyclovirus 3 | *Erythemis simplicicollis* | USA | *Dragonfly associated cyclovirus 3* | *Cyclovirus tonbo* | dragonfly in Japanese |
| KC512916 | dragonfly cyclovirus 4 | *Aeshna multicolor* | USA | *Dragonfly associated cyclovirus 4* | *Cyclovirus vazka* | dragonfly in Slovakian |
| JX185426 | dragonfly cyclovirus 5 | *Erythrodiplax umbrata* | Puerto Rico | *Dragonfly associated cyclovirus 5* | *Cyclovirus libelula* | dragonfly in Spanish |
| KC512918 | dragonfly cyclovirus 6 | *Aeshna multicolor* | USA | *Dragonfly associated cyclovirus 6* | *Cyclovirus babka* | dragonfly in Ukrainian |
| KC512919 | dragonfly cyclovirus 7 | *Xanthocnemis zealandica* | New Zealand | *Dragonfly associated cyclovirus 7* | *Cyclovirus namu* | dragonfly in Māori |
| KC512920 | dragonfly cyclovirus 8 | *Orthetrum Sabina* | Australia | *Dragonfly associated cyclovirus 8* | *Cyclovirus tarako* | dragonfly in Samoan |
| KY851116 | duck associated cyclovirus 1 | *Anas platyrhynchos* | Hungary | *Duck associated cyclovirus 1* | *Cyclovirus kacsa* | duck in Hungarian |
| KM017740 | feline cyclovirus | *Felis catus* | USA | *Feline associated cyclovirus 1* | *Cyclovirus gato* | cat in Spanish |
| HQ738636 | cyclovirus PKgoat11/PAK/2009 | *Capra aegagrus hircus* | Pakistan | *Goat associated cyclovirus 1* | *Cyclovirus bakri* | goat in Urdu |
| KR902499 | cyclovirus Equ1 | *Equus caballus* | USA | *Horse associated cyclovirus 1* | *Cyclovirus caballo* | horse in Spanish |
| GQ404847 | cyclovirus PK5510 | *Homo sapiens* | Pakistan | *Human associated cyclovirus 1* | *Cyclovirus maanav* | human in Hindi |
| GQ404844 | cyclovirus PK500 | *Homo sapiens* | Pakistan | *Human associated cyclovirus 2* | *Cyclovirus insaan* | human in Urdu |
| GQ404846 | cyclovirus PK5222 | *Homo sapiens* | Pakistan | *Human associated cyclovirus 3* | *Cyclovirus manukha* | human in Punjabi |
| GQ404857 | cyclovirus TN25 | *Homo sapiens* | Tunisia | *Human associated cyclovirus 4* | *Cyclovirus bashri* | human in Arabic |
| GQ404845 | cyclovirus PK5034 | *Homo sapiens* | Pakistan | *Human associated cyclovirus 5* | *Cyclovirus homa* | human in Esperanto |
| GQ404854 | cyclovirus NG12 | *Homo sapiens* | Nigeria | *Human associated cyclovirus 6* | *Cyclovirus mmadu* | human in Igbo |
| GQ404855 | cyclovirus NG14 | *Homo sapiens* | Nigeria | *Human associated cyclovirus 7* | *Cyclovirus mutum* | human in Hausa |
| KF031466 | cyclovirus VN | *Homo sapiens* | Vietnam | *Human associated cyclovirus 8* | *Cyclovirus nhanloai* | human in Vietnamese |
| KC771281 | Human cyclovirus VS5700009 | *Homo sapiens* | Malawi | *Human associated cyclovirus 9* | *Cyclovirus munthu* | human in Chichewa |
| KF726984 | human associated cyclovirus 10 | *Homo sapiens* | Chile | *Human associated cyclovirus 10* | *Cyclovirus humana* | human in Spanish |
| KJ831064 | cyclovirus SL-108277 | *Homo sapiens* | Sri Lanka | *Human associated cyclovirus 11* | *Cyclovirus manitan* | human in Tamil |
| KU053483 | Indian encephalitis associated cyclovirus | *Homo sapiens* | India | *Human associated cyclovirus 12* | *Cyclovirus manusyan* | human in Malayalam |
| KT878836 | mouse associated cyclovirus 1 | mouse | USA | *Mouse associated cyclovirus 1* | *Cyclovirus naastsosi* | small rodent in Navajo |
| KY370028 | rodent associated cyclovirus 1 | *Rattus flavipectus* | China | *Rodent associated cyclovirus 1* | *Cyclovirus rata* | rat in Galician |
| KY370026 | rodent associated cyclovirus 2 | *Rattus tanezumi sladeni* | China | *Rodent associated cyclovirus 2* | *Cyclovirus podgana* | rat in Slovenian |
| MH545516 | soft spider associated circular virus 1 | Cybaeidae | Canada | *Spider associated cyclovirus 1* | *Cyclovirus aasiak* | spider in Inuktitut |
| LC018134 | cyclovirus TsCyV-1 | *Callosciurus erythraeus thaiwanensis* | Japan | *Squirrel associated cyclovirus 1* | *Cyclovirus risi* | squirrel in Japanese |

**Table 2:** Summary of the taxonomy of new proposed species in the family *Circoviridae*. Binomial species names are in blue font.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Accession** | **Virus name** | ***host /source*** | **Country** | **Species name** | **Epithet notes** |
| MN164712 | werosea circovirus | *Leptonychotes weddellii* | Antarctica | *Circovirus tetning* | seal in Norwegian |
| MT610105 | sonfela circovirus 1 | *Lynx rufus* | Mexico | *Circovirus miztli* | Mountain lion in Nahuatl |
| MT610106 | sonfela circovirus 2 | *Lynx rufus* | Mexico | *Circovirus miztontli* | cat in Milpa Alta |
| MW686208 | wolvfec circovius | *Gulo gulo* | USA | *Circovirus gloton* | wolverine in Spanish |
| MW881235 | equine circovirus 1 | *Equus ferus caballus* | USA | *Circovirus lin* | horse in Navajo |
| MZ382570 | Mongoose-associated circovirus Mon-1 | *Urva auropunctata* | Saint Kitts and Nevis | *Circovirus magu* | mongoose in Punjabi |
| MZ604582 | wigfec circovirus 1 | *Mareca americana* | USA | *Circovirus naaleeli* | waterfowl in Navajo |
| MZ604590 | wigfec circovirus 2 | *Mareca americana* | USA | *Circovirus pato* | waterfowl in Spanish |
| OL704833 | Eumops bonariensis associated circovirus 1 | *Eumops bonariensis* | Argentina | *Circovirus tzinaka* | bat in Nahuatl |
| OM869597 | dipodfec virus UA04Rod\_4537 | *Dipodomys merriami feces* | USA | *Circovirus hirat* | rat in Volapuk |
| ON596197 | calfel virus LSF45\_cir359 | *Lynx rufus* | USA | *Circovirus wesa* | cat in Cherokee |
| MN176052 | werosea cyclovirus | *Leptonychotes weddellii* | Antarctica | *Cyclovirus foca* | seal in Galician |
| MT707947 | Caesalpinia ferrea associated virus | *Libidibia ferrea* | Brazil | *Cyclovirus pauferro* | common word for this tree in Brazil - (pau ferro) |
| MT766309 | bat associated cyclovirus Cg1 | *Chalinolobus gouldii* | Australia | *Cyclovirus vauval* | bat in Tamil |
| MT766312 | bat associated cyclovirus Vr1 | *Eptesicus regulus* | Australia | *Cyclovirus netopyr* | bat in Czech |
| MZ350964 | robinz virus RP\_259 | *Petroica australis* | New Zealand | *Cyclovirus totoi* | robin in Māori |
| MZ350965 | robinz virus RP\_493 | *Petroica australis* | New Zealand | *Cyclovirus pettirosso* | robin in Italian |
| MZ350966 | robinz virus RP\_526 | *Petroica australis* | New Zealand | *Cyclovirus punarinta* | robin in Finnish |
| MZ350967 | robinz virus RP\_584 | *Petroica australis* | New Zealand | *Cyclovirus rudzik* | robin in Polish |
| MZ350968 | robinz virus RP\_620 | *Petroica australis* | New Zealand | *Cyclovirus prihor* | robin in Romanian |
| MZ350969 | robinz virus RP\_736 | *Petroica australis* | New Zealand | *Cyclovirus cervienka* | robin in Slovak |
| MZ350973 | robinz virus RP\_1170 | *Petroica australis* | New Zealand | *Cyclovirus liepsnele* | robin in Lithuanian |
| MZ382572 | mongoose-associated cyclovirus Mon-32 | *Urva auropunctata* | Saint Kitts and Nevis | *Cyclovirus newla* | small Indian mongoose in Hindi |
| MZ382573 | mongoose-associated cyclovirus Mon-20 | *Urva auropunctata* | Saint Kitts and Nevis | *Cyclovirus mweyba* | small Indian mongoose in Burmese |
| OL704826 | bat associated cyclovirus 17 | *Molossus molossus* | Argentina | *Cyclovirus murcielago* | bat in Spanish |
| OL704827 | Tadarida brasiliensis associated cyclovirus 1 | *Tadarida brasiliensis* | Argentina | *Cyclovirus vespertilio* | bat in Latin |
| OL704828 | Eumops bonariensis associated cyclovirus 1 | *Eumops bonariensis* | Argentina | *Cyclovirus muricec* | bat in Catalan |
| OM262451 | chifec virus UA13\_1727 | *Tadarida brasiliensis* | USA | *Cyclovirus saguza* | bat in Basque |
| OM262452 | chifec virus UA13\_1817 | *Tadarida brasiliensis* | USA | *Cyclovirus sawya* | bat in Hopi |
| OM262453 | chifec virus UA15\_35 | *Lasionycteris noctivagans* | USA | *Cyclovirus prilep* | bat in Bulgarian |
| OM262456 | chifec virus UA13\_1880 | *Tadarida brasiliensis* | USA | *Cyclovirus fledermoyz* | bat in Yiddish |
| OM262457 | chifec virus UA13\_1887 | *Tadarida brasiliensis* | USA | *Cyclovirus vleermuis* | bat in Dutch |
| OM262458 | chifec virus UA13\_1800 | *Tadarida brasiliensis* | USA | *Cyclovirus ystlum* | bat in Welsh |
| OM262459 | chifec virus UA15\_2320 | *Lasionycteris noctivagans* | USA | *Cyclovirus liljak* | bat in Macedonian |
| OM869595 | dipodfec virus UA04Rod\_5913 | *Dipodomys merriami* | USA | *Cyclovirus rotte* | rat in Danish |
| OM869613 | dipodfec virus UA23Rod\_1805 | *Dipodomys spectabilis* | USA | *Cyclovirus kemirgen* | rodent in Turkish |
| ON324066 | Army ant associated cyclovirus 3 P1A-reste\_4 | *Dorylus* sp. | Gabon | *Cyclovirus ibimonyo* | ant in Kinyarwanda |
| ON324069 | army ant associated cyclovirus 6 P16-reste\_1 | *Dorylus* sp. | Gabon | *Cyclovirus fourmi* | ant in French |
| ON324071 | army ant associated cyclovirus 2 P8A-4.2\_2 | *Dorylus* sp. | Gabon | *Cyclovirus anyidiwo* | ant in Ewe |
| ON324100 | army ant associated cyclovirus 1 P21/23-reste\_1 | *Dorylus* sp. | Gabon | *Cyclovirus kokoro* | ant in Yoruba |
| ON324103 | army ant associated cyclovirus 4 P8A-3.2\_1 | *Dorylus* sp. | Gabon | *Cyclovirus mier* | ant in Dutch |
| ON324104 | army ant associated cyclovirus 5 170\_4 | *Dorylus* sp. | Gabon | *Cyclovirus bohloa* | ant in Sesotho |
| ON324106 | army ant associated cyclovirus 7 P4A-reste\_1 | *Dorylus* sp. | Gabon | *Cyclovirus svosve* | ant in Shona |
| ON324107 | army ant associated cyclovirus 8 P1A-reste\_2 | *Dorylus* sp. | Gabon | *Cyclovirus enseenene* | ant in Luganda |
| ON324108 | army ant associated cyclovirus 9 183\_1 | *Dorylus* sp. | Gabon | *Cyclovirus ndanda* | ant in Igbo |
| ON596192 | calfel virus LSF17\_cyc102 | *Lynx rufus* | USA | *Cyclovirus popoki* | cat in Hawaiian |
| ON596195 | calfel virus LSF31\_cyc420 | *Lynx rufus* | USA | *Cyclovirus misi* | cat in Quechua |
| ON596196 | calfel virus LSF31\_cyc880 | *Lynx rufus* | USA | *Cyclovirus moosa* | cat in Hopi |

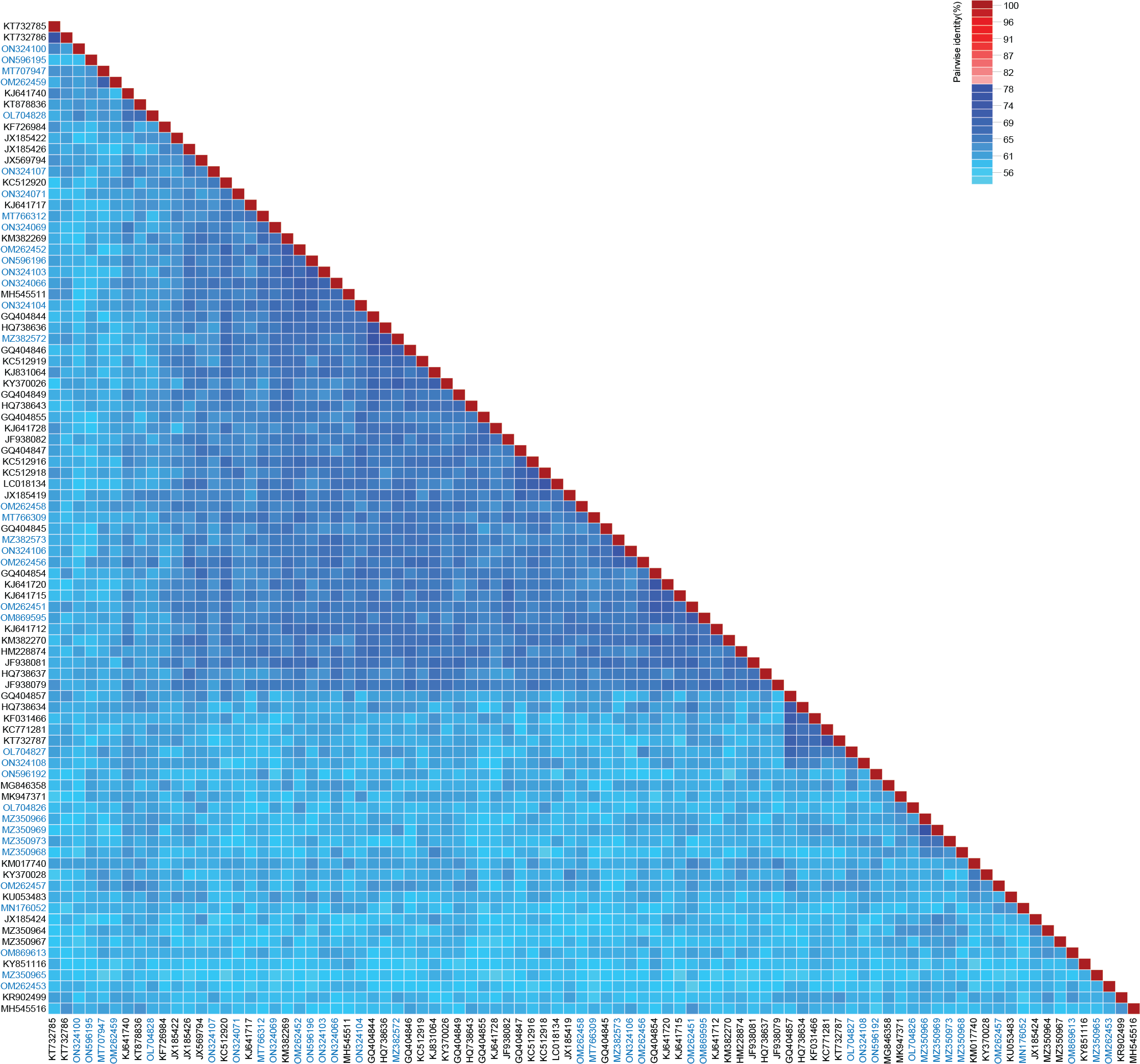
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**Figure 1:** A ‘two color’ pairwise identity matrix of representative genome-wide comparisons among sequences in the genus *Circovirus* inferred using SDT v1.2 [3]. Representative sequences from the proposed new species (n=11) are highlighted in blue font.

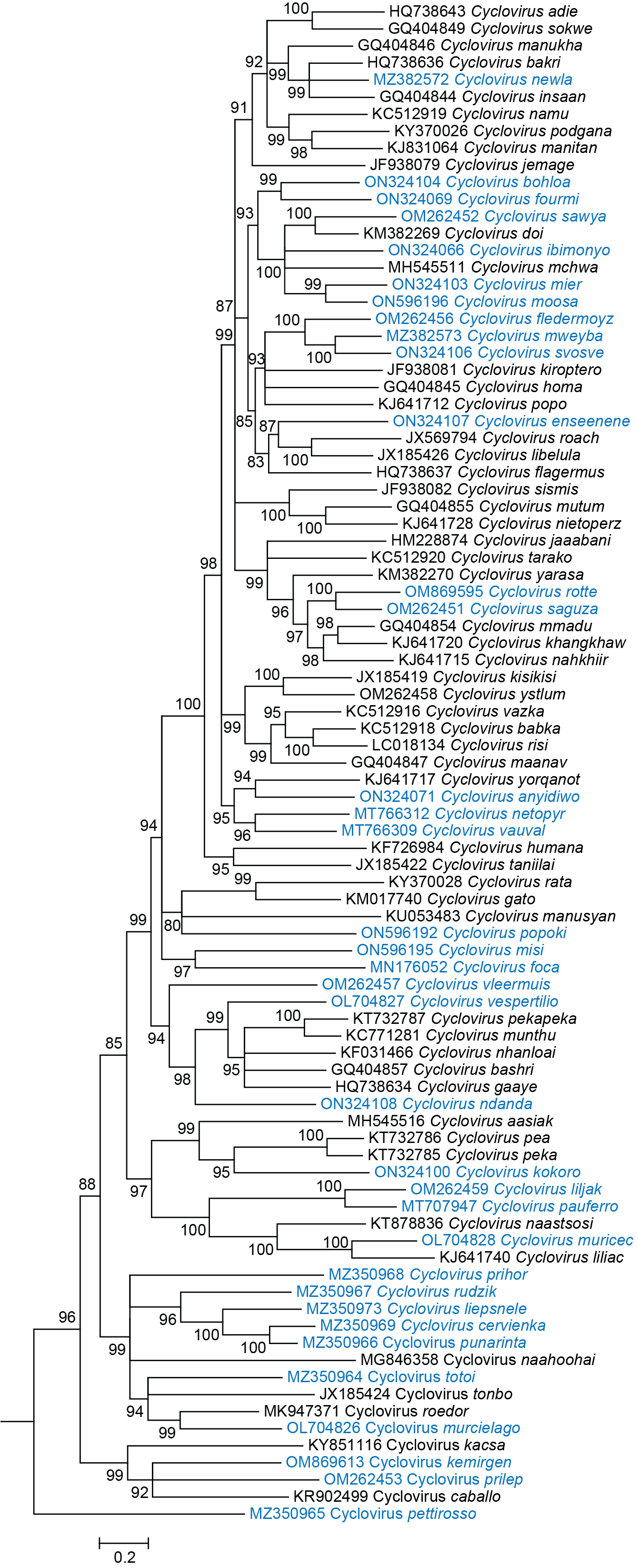
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**Figure 2:** Maximum likelihood phylogenetic tree (rooted with reverse complement sequences of cycloviruses) of representative genomes from each circovirus species (aligned with MAFFT v7 [4]) inferred using PHYML [5] with GTR+I+G4 chosen as the best fit model. Branches with <0.8 aLRT (approximate likelihood ratio test) branch support have been collapsed with TreeGraph2 [6].

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**Figure 3:** A ‘two color’ pairwise identity matrix of representative genome-wide comparisons among sequences in the genus *Cyclovirus* inferred using SDT v1.2 [3]. Representative sequences from the proposed new species (n=37) are highlighted in blue font.

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**Figure 4:** Maximum likelihood phylogenetic tree (rooted with reverse complement sequences of circoviruses) of representative genomes from each cyclovirus species (aligned with MAFFT v7 [4]) inferred using PHYML [5] with GTR+I+G4 chosen as the best fit model. Branches with <0.8 aLRT (approximate likelihood ratio test) branch support have been collapsed with TreeGraph2 [6].

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