

Supplementary Material

Supplementary Table. Viruses found to be associated with bats under natural conditions.

Family	Genera/species	Bat genera/species associated with the virus	Geographical locations	Method of detection ^a	References
Arenaviridae	Tacaribe virus	<i>Artibeus jamaicensis</i> , <i>Artibeus lituratus</i> , <i>Desmodus rotundus</i> , <i>Phyllostomus hastatus</i> , <i>Sturnira lilium</i> , <i>Tonatia bidens</i> , <i>Uroderma bilobatum</i> , <i>Vampyrops helleri</i>	Trinidad	Serology	22, 23
	Bimiti virus	<i>Anoura geoffroyi</i> , <i>Carollia perspicillata</i> , <i>Natalus tumidirostris</i> , <i>Phyllostomus hastatus</i> , <i>Pteronotus parnellii</i>	Trinidad	Serology	23
Bunyaviridae	Catu virus	<i>Anoura geoffroyi</i> , <i>Carollia perspicillata</i> , <i>Phyllostomus hastatus</i>	Trinidad	Serology	23
	Guama virus	<i>Anoura geoffroyi</i> , <i>Artibeus lituratus</i> , <i>Phyllostomus hastatus</i>	Trinidad	Serology	23
	Kaeng Khoi virus	<i>Chaerephon plicata</i> , <i>Taphozous theobaldi</i>	Thailand	Culture, serology	24
	Manzanilla virus	<i>Chaerephon plicata</i>	Cambodia	Culture	25
	Mojú dos Campos virus	<i>Molossus ater</i>	Trinidad	Serology	23
	Nepuyo virus	Unknown	Brazil	Culture	158
		<i>Artibeus jamaicensis</i> , <i>Phyllostomus hastatus</i>	Trinidad	Serology	23
		<i>Artibeus lituratus</i>	Trinidad	Serology	23
		<i>Pipistrellus kuhli</i>	Italy	Culture	27
		<i>Rhinolophus sinicus</i> (R. rouxii)	Hong Kong	RT-PCR	39
Coronaviridae	Bat-SARS-CoV	<i>Miniopterus magnater</i> , <i>Miniopterus pusillus</i> , <i>Miniopterus schreibersii</i>	Hong Kong	RT-PCR	40
	Bat-CoV	<i>Rhinolophus sinicus</i> (R. rouxii)	Hong Kong	RT-PCR	41
	Bat-CoV-HKU2	<i>Rhinolophus sinicus</i> (R. rouxii)	Hong Kong	RT-PCR	41

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Supplementary Table (Continued)

Family	Genera/species	Bat genera/species associated with the virus	Geographical locations	Method of detection ^a	References
	Bat-CoV-HKU4	<i>Tylonycteris pachypus</i>	Hong Kong	RT-PCR	41
	Bat-CoV-HKU5	<i>Pipistrellus abramus</i>	Hong Kong	RT-PCR	41
	Bat-CoV-HKU6	<i>Myotis ricketti</i>	Hong Kong	RT-PCR	41
	Bat-CoV-HKU7	<i>Miniopterus magnater</i>	Hong Kong	RT-PCR	41
	Bat-CoV-HKU8	<i>Miniopterus pusillus</i>	Hong Kong	RT-PCR	41
	SARS-like coronaviruses	<i>Rhinolophus ferrumequinum</i> , <i>Rhinolophus macrotis</i> , <i>Rhinolophus pearsoni</i> , <i>Rhinolophus pussilus</i> , <i>Rousettus leschenaulti</i>	China	Serology, RT-PCR	42
Filoviridae	Ebola virus	<i>Hypsignathus monstrosus</i> , <i>Epomops franqueti</i> , <i>Myonycteris torquata</i>	Gabon, Republic of the Congo	Serology, RT-PCR	46
Flaviviridae	Dengue virus	<i>Artibeus</i> spp., <i>Molossus</i> spp., <i>Uroderma</i> spp. <i>Rousettus leschenaulti</i>	Costa Rica, Ecuador Hainan Island, China	Serology RT-PCR	56 57
	Ilheus virus	<i>Anoura geoffroyi</i> , <i>Phyllostomus hastatus</i> , <i>Pteronotus davyi</i>	Trinidad	Serology	23
	Japanese encephalitis virus	<i>Miniopterus schreibersi fuliginosus</i> , <i>Rhinolophus cornutus cornutus</i>	Japan	Culture	55
	Kyasanur Forest disease virus	<i>Hipposideros armiger terasensis</i> , <i>Miniopterus schreibersi fuliginosus</i>	Taiwan	Culture	16
	Montana <i>Myotis</i> leukocephalitis virus	<i>Cynopterus sphinx</i> , <i>Rhinolophus rouxi</i>	India	Culture	58, 59
	Rio Bravo virus	<i>Myotis lucifugus</i>	Montana, USA	Culture	60
	St. Louis encephalitis virus	<i>Tadarida brasiliensis</i> <i>Molossus ater</i> <i>Eptesicus fuscus</i> , <i>Myotis lucifugus</i> <i>Anoura geoffroyi</i> , <i>Artibeus jamaicensis</i> , <i>Artibeus lituratus</i> , <i>Carollia perispicillata</i> , <i>Molossus ater</i> , <i>Molossus molossus</i> , <i>Natalus tumidirostris</i> , <i>Phyllostomus hastatus</i> , <i>Pteronotus davyi</i> , <i>Pteronotus parnellii</i> , <i>Sturnira</i> spp.	USA, Mexico Trinidad Ohio, USA Trinidad	Culture Culture Serology Serology	62 63 54 23

Tamana bat virus	<i>Pteronotus parnellii</i>	Trinidad	Culture	63
West Nile virus	<i>Rousettus leschenaulti</i>	India	Culture	47
	<i>Eptesicus fuscus</i>	Wisconsin, USA	Not mentioned	48
	<i>Eptesicus fuscus</i> , <i>Myotis lucifugus</i>	USA	RT-PCR	49
	<i>Myotis lucifugus</i> , <i>Myotis septentrionalis</i>	New Jersey, USA	Serology	50
Yellow fever virus	<i>Artibeus cinereus</i> , <i>Artibeus jamaicensis</i> , <i>Artibeus lituratus</i> , <i>Carollia perspicillata</i> , <i>Glossophaga soricina</i> , <i>Molossus ater</i> , <i>Molossus molossus</i> , <i>Phyllostomus hastatus</i> , <i>Pteronotus davyi</i> , <i>Pteronotus parnellii</i> , <i>Vampyrops helleri</i>	Trinidad	Serology	23
Yokose virus	<i>Miniopterus fuliginosus</i>	Japan	Culture	65
Influenza A viruses	<i>Nyctalus noctula</i>	Kazakhstan	Culture	67
	<i>Cynopterus sphinx</i> , <i>Megaderma lyra</i> , <i>Pipistrellus ceylonicus</i> , <i>Rousettus leschenaulti</i>	India	Serology	68
Hendra virus	<i>Pteropus alecto</i> , <i>P. conspicillatus</i> , <i>P. poliocephalus</i> , <i>P. scapulatus</i>	Australia	Serology	74
Menangle virus	<i>Pteropus alecto</i> , <i>P. poliocephalus</i>	Australia	Culture	75
Nipah virus	<i>Pteropus alecto</i> , <i>P. poliocephalus</i>	Australia	Culture	95
	<i>Cynopterus brachyotis</i> , <i>Eonycteris spelea</i> , <i>Pteropus hypomelanus</i> , <i>P. vampyrus</i> , <i>Scotophilus kuhli</i>	Malaysia	Serology	84
	<i>Pteropus hypomelanus</i>	Malaysia	Culture	85
	<i>Pteropus giganteus</i>	Bangladesh	Serology	89
	<i>Pteropus lylei</i>	Cambodia	Serology, culture	91, 92
	<i>Hipposideros larvatus</i> , <i>Pteropus hypomelanus</i> , <i>P. lylei</i> , <i>P. vampyrus</i>	Thailand	Serology, RT-PCR	93
Mapuera virus	<i>Pteropus vampyrus</i>	Indonesia	Serology	94
Parainfluenza virus	<i>Sturnira lilium</i>	Brazil	Culture	71
Tioman virus	<i>Rousettus leschenaulti</i>	India	Culture	69, 70
	<i>Pteropus hypomelanus</i>	Malaysia	Culture	98

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Supplementary Table (Continued)

Family	Genera/species	Bat genera/species associated with the virus	Geographical locations	Method of detection ^a	References
Reoviridae	Nelson Bay virus	<i>Pteropus poliocephalus</i>	Australia	Culture	100
Retroviridae	Pulau virus	<i>Pteropus hypomelanus</i>	Malaysia	Culture	101
	CpERV-β5_AC138156	<i>Carollia perspicillata</i>	Central and South America	PCR	102
Rhabdoviridae	Cocal virus	<i>Phyllostomus hastatus</i>	Trinidad	Serology	23
	Rabies virus (Lyssavirus genotype 1)	<i>Artibeus</i> spp., <i>Desmodus rotundus</i> , <i>Eptesicus</i> spp., <i>Eumops auripendulus</i> , <i>Histiotus montanus</i> , <i>Lasionycteris noctirogans</i> , <i>Lasiurus</i> spp., <i>Molossus</i> spp., <i>Myotis</i> spp., <i>Nyctinomops laticaudatus</i> , <i>Pipistrellus subflavus</i> , <i>Pipistrellus herpessus</i> , <i>Tadarida brasiliensis</i>	Worldwide	Microscopy, culture, RT-PCR	117–124
	Lagos bat virus (Lyssavirus genotype 2)	<i>Pteropus poliocephalus</i>	India	Culture	125
		<i>Eidolon helvum</i> , <i>Epomops wahlbergi</i> , <i>Micropteropus pussilus</i> , <i>Nycteris cambiensis</i> , <i>Rousettus aegyptiacus</i>	Nigeria, South Africa, Central African Republic, Senegal, Zimbabwe, Ethiopia, Egypt	Culture	109
	Duvenhage virus (Lyssavirus genotype 4)	<i>Miniopterus schreibersii</i> , <i>Nycteris thebaica</i>	South Africa	Culture	110, 111
	European bat lyssaviruses 1 (Lyssavirus genotype 5)	<i>Eptesicus serotinus</i> , <i>Vespertilio murinus</i>	Europe	Microscopy, culture, RT-PCR	128, 129, 131

<i>Eptesicus serotinus</i> , <i>Myotis myotis</i> , <i>Myotis nattereri</i> , <i>Miniopterus schreibersii</i> , <i>Rhinolophus ferrumequinum</i> , <i>Tadarida teniotis</i> , <i>Vespertilio murinus</i> <i>Rousettus aegyptiacus</i>	Spain	Microscopy, serology, RT-PCR	130
	Zoo bat in Denmark imported from the Netherlands	Microscopy, culture	129
European bat lyssaviruses 2 (Lyssavirus genotype 6)	<i>Myotis daubentonii</i> , <i>M. dasycneme</i>	Microscopy, serology, RT-PCR	128, 130
	<i>Myotis daubentonii</i>	Culture, serology, RT-PCR	133
	<i>Myotis daubentonii</i>	Microscopy, culture, RT-PCR	134
Australian bat lyssavirus (Lyssavirus genotype 7)	<i>Pteropus alecto</i> , <i>P. conspicillatus</i> , <i>P. poliocephalus</i> , <i>P. scapulatus</i> , <i>Saccolaimus flaviventris</i>	Culture	135, 137
Aravan virus	<i>Myotis blythii</i>	Culture	106
Irkut virus	<i>Murina leucogaster</i>	Culture	107
Khujand virus	<i>Myotis mystacinus</i>	Culture	108
West Caucasian bat virus	<i>Miniopterus schreibersii</i>	Culture	107
Lyssaviruses	<i>Mineopterus schreibersii</i> , <i>Philetor brachypteris</i> , <i>Pteropus hypomelanus</i> , <i>Rousettus amplexicaudatus</i> , <i>Scotophilus kuhlii</i> , <i>Taphozous melanopogon</i>	Serology	140

(Continues)

Supplementary Table (Continued)

Family	Genera/species	Bat genera/species associated with the virus	Geographical locations	Method of detection ^a	References		
Togaviridae		<i>Cynopterus sphinx</i> , <i>Hipposideros larvatus</i> , <i>Pteropus lylei</i> , <i>Scotophilus kuhlii</i> , <i>Tadarida plicata</i> , <i>Taphozous theobaldi</i> , <i>Taphozous melanopogon</i> , <i>Hipposideros armiger</i> , <i>Pteropus lylei</i> , <i>Pteropus giganteus</i>	Cambodia	Serology	141		
	Mount Elgon bat virus	<i>Rhinolophus hildebrandtii eloquens</i>	Thailand	Serology	142		
	Chikungunya virus	<i>Scotophilus</i> spp.	Bangladesh	Serology	143		
	Eastern equine encephalitis virus	<i>Artibeus lituratus</i> , <i>Carollia perspicillata</i> , <i>Phyllostomus hastatus</i> , <i>Platyrrhinus (Vampyrops) helleri</i>	Kenya	Culture	Culture	105	
		<i>Artibeus intermedius</i> , <i>Artibeus jamaicensis</i> , <i>Artibeus lituratus</i> , <i>Glossophaga soricina</i> , <i>Rhynchonycteris naso</i> , <i>Sturnira lilium</i>	Senegal	Culture	Culture	149	
		<i>Molossus ater</i> , <i>Phyllostomus hastatus</i>	Trinidad	Serology	Serology	23	
		<i>Artibeus jamaicensis</i> , <i>Carollia brevicauda</i> , <i>Phyllostomus discolor</i> , <i>Sturnira lilium</i> , <i>Sturnira ludovici</i>	Guatemala	Serology	Serology	150	
		<i>Uroderma bilobatum</i>					
		<i>Desmodus rotundus</i>	Guatemala	Culture	Culture	152	
		<i>Carollia perspicillata</i>	Mexico	Culture	Culture	153	
		<i>Artibeus jamaicensis</i> , <i>Artibeus lituratus</i> , <i>Artibeus phaeotis</i> , <i>Desmodus rotundus</i> , <i>Glossophaga commissarisi</i> , <i>Myotis nigricans</i> , <i>Uroderma bilobatum</i>	Brazil	Culture	Culture	154	
		<i>Artibeus lituratus</i>	Guatemala	Serology, culture	Serology, culture	152	
					(<i>Uroderma bilobatum</i> only)		
		Western equine encephalitis virus		Guatemala	Serology	Serology	150

^aMicroscopy, includes light microscopy, electron microscopy, histopathology, immunohistopathology, and direct immunofluorescent staining of tissues. Culture, includes cell cultures and animal inoculation.