

**Supplementary Table S1.** The distribution, insect vector, host range, and disease observations for the 33 viruses within the Simbu serogroup as arranged by their species designation [1]

Virus species	Virus name	Clade	Accession	Distribution	Insect vectors	Animal hosts	Animal disease (Species, clinical signs, and pathological description)
<i>Orthobunyavirus ainoense</i>	Aino virus	B	L: HE795087 M: HE795088 S: HE795089	Australia [2], Israel [3], Japan [4], South Korea [5], Tanzania [6]	<i>Culicoides</i> midges, mosquitoes [4]	Bovine [2, 7, 8], Caprine [9], Cervids [10], Equine [11, 12], Ovine [9], Swine [8, 12]	Bovine – astasia [13], leukopenia [13], congenital malformations following intrauterine infection [14-20], disseminated non-purulent encephalomyelitis following experimental infection [21]  Chicken embryo – death and deformities [22]
<i>Orthobunyavirus akabaneense</i>	Akabane virus	B	L: AB190458 M: AB100604 S: AB000851	Australia [23], China [24], Cyprus [25], Oman [26], Iran [27], Israel [28], Japan [29], Kenya [30], South Africa [31], South Korea [32], Taiwan [33], Tanzania [6], Vietnam [34]	<i>Culicoides</i> midges [31]	Bovine [35], Caprine [35], Cervid [36], Equine [36, 37], Ovine [35], <i>Rhinocerotidae</i> (Black and White Rhino) [38], Swine [39]	Bovine, caprine and ovine - congenital malformations following intrauterine infection [35, 40, 41] Bovine – non-suppurative encephalitis, abortion [33]  Porcine – decreased appetite, pyrexia, leukopenia, foetal infection [39]  Chicken embryo – death and deformities [22]
	Tinaroo virus	B	L: MH484339 M: MH484340 S: MH484341	Australia [42], Tanzania [6]	<i>Culicoides</i> midges [42]	Bovine [36], Caprine [36], Ovine [36]	Chicken embryo – death and deformities [22]
	Yaba-7 virus	unassigned	L: MH484348 M: MH484349 S: MH484350	Nigeria [43]	Mosquitoes [43]	Bovine [43]	No reports
<i>Orthobunyavirus buttonwillowense</i>	Buttonwillow virus	A	L: KF697160 M: KF697161 S: KF697162	Canada [44], United States of America [44]	<i>Culicoides</i> midges, mosquitoes [44]	Laprime (rabbits and hares) [44], <i>Sciuridae</i> (marmot) [44]	Murine – subclinical after subcutaneous or intraperitoneal injection. Death following intracranial inoculation [44]  Laprime and ovine – asymptomatic [44]
<i>Orthobunyavirus catqueense</i>	Cát Quế virus	A	L: JQ675598 M: JQ675599 S: JQ675600	China [45], India [46], Uganda [47], Vietnam [34]	Mosquitoes [34]	Swine [34]	Murine – paralysis, death [46]  Human - paediatric encephalitis [34]
	Oya virus	unassigned	L: JX983194 M: JX983193 S: JX983192	China [48], India [49], Malaysia [50], Vietnam [34]	Mosquitoes [34]	Swine [50]	No reports
<i>Orthobunyavirus faceyense</i>	Facey's paddock virus	A	L: KF697138 M: KF697137 S: KF697136	Australia [51]	Mosquitoes [51]	Not known [22]	Chicken embryo – death and deformities [22]

Virus species	Virus name	Clade	Accession	Distribution	Insect vectors	Animal hosts	Animal disease (Species, clinical signs, and pathological description)
<i>Orthobunyavirus ingwavumaense</i>	Ingwavuma virus	A	L: KF697139 M: KF697140 S: KF697141	India [52], Indonesia [53], Nigeria [54], South Africa [55], Thailand [56]	Mosquitoes [55]	Avian [55], Bovine [53], Canine [56], Caprine [53], Human [54], Ovine [53], Swine [56]	No reports
<i>Orthobunyavirus jatobalense</i>	Jatobal virus	A	L: JQ675603 M: JQ675602 S: JQ675601	Brazil [57]	No reports	Procyonidae (coati) [57]	No reports
<i>Orthobunyavirus manzanillaense</i>	Manzanilla virus	A	L: KF697150 M: KF697149 S: KF697148	Trinidad [58]	Mosquitoes [58]	<i>Atelidae</i> (howler monkey) [58], <i>Molossidae</i> (black mastiff bat) [59]	No reports
	Inini virus	A	No reports	French Guiana [60]	No reports	Avian (toucan) [60]	No reports
<i>Orthobunyavirus mermetense</i>	Mermet virus	A	L: KF697153 M: KF697151 S: KF697152	Guatemala [61], United States of America [62]	Mosquitoes [63]	Avian (warbler, purple martin, black-bird, thrush, blue jay) [64]	Murine- newborn mice illness following intracerebral inoculation [65]
<i>Orthobunyavirus oropoucheense</i>	Oropouche virus	A	L: AF484424 M: AF441119 S: AY237111	Brazil [66], Peru [67], Trinidad [68]	<i>Culicodes</i> midges [69], mosquitoes [70]	Humans [68]	Human – febrile illness [66], laboratory- acquired infection [42].
	Iquitos virus	A	L: KF697142 M: KF697143 S: KF697144	Peru [71]	No reports	Humans [71]	Human – febrile illness [71]
	Madre de Dios virus	A	L: KF697147 M: KF697145 S: KF697146	Venezuela [72]	No reports	<i>Cebidae</i> (capuchin) [72]	Primates - an epizootic of illness among sylvatic monkeys (associated with reports of dead and moribund monkeys) [72]
	Perdões virus	A	L: KP691627 M: KP691628 S: KP691629	Brazil [73]	No reports	<i>Callitrichidae</i> (marmoset) [73]	No reports
	Pintupo virus	A	No reports	Panama [74]	No reports	Folivora – sloths [74]	No reports
<i>Orthobunyavirus oyoense</i>	Oyo virus	unassigned	L: HM639780 M: HM639779 S: HM639778	Nigeria [75]	No reports	No reports	No reports
<i>Orthobunyavirus peachesterense</i>	Peaton virus	B	L: HE795093 M: HE795094 S: HE795095	Australia [36], Israel [76], Japan [77], South Korea [78], Tanzania [6]	<i>Culicodes</i> midges [79]	Bovine [36], Caprine [36], Cervid [36], Equine [36], Ovine [36], Swine [80]	Bovine – congenital abnormalities and abnormal birth [76, 77]  Chicken embryo – death [22]
<i>Orthobunyavirus saboense</i>	Sabo virus	B	L: HE795096 M: HE795097 S: HE795098	Nigeria [43], Tanzania [6]	<i>Culicodes</i> midges [81]	Bovine [43], Caprine [43]	No reports
<i>Orthobunyavirus saboense</i>	Sango virus	B	L: HE795099 M: HE795100 S: HE795101	Nigeria [43]	<i>Culicodes</i> midges [81]	Bovine [43]	No reports

Virus species	Virus name	Clade	Accession	Distribution	Insect vectors	Animal hosts	Animal disease (Species, clinical signs, and pathological description)
<i>Orthobunyavirus schmallenbergense</i>	Schmallenberg virus	B	L: KC355457 M: KC355458 S: KC355459	Albania [82], Austria [83], Belgium [84], China [85], Croatia [86], France [84], Germany [84], Greece [87], Iraq [88], Ireland [89], Italy [84], Kosovo [82], Luxembourg [84], Namibia [90], the Netherlands [84], Poland [91], Russia [92], Slovenia [93], Spain [84], Turkey [94], the United Kingdom [84], Tanzania [6]	<i>Culicodes</i> midges [95]	Bovine [96], Caprine [97], Cervids [98], Ovine [96], Ungulates [99]	Bovine, caprine and ovine - congenital malformations following intrauterine infection [100, 101], stillborn [100], premature birth [100]  Bovine - sudden decreased milk production, watery diarrhea and pyrexia [102]
	Douglas virus	B	L: HE795090 M: HE795091 S: HE795092	Australia [42], Papua New Guinea [36], Tanzania [6]	<i>Culicodes</i> midges [42]	Bovine [36], Caprine [36], Cervid [36], Equine [36], Ovine [36]	Chicken embryo – death and deformities [22]
	Sathuperi virus	B	L: HE795102 M: HE795103 S: HE795104	India [103], Israel [3], Japan [104], Nigeria [43], South Korea [5], Tanzania [6]	<i>Culicodes</i> midges [81], mosquitoes [103]	Bovine [43]	No reports
	Shamonda virus	B	L: HE795105 M: HE795106 S: HE795107	Israel [3], Japan [105], Nigeria [43], Tanzania [6]	<i>Culicodes</i> midges [81]	Bovine [43]	Bovine - congenital malformations following intrauterine infection [106]
<i>Orthobunyavirus shuniense</i>	Shuni virus	B	L: KF153118 M: KF153117 S: KC510272	Israel [107], Nigeria [81], South Africa [108].	<i>Culicodes</i> midges [81]	Bovine [43], Equine [108], Human [43], Ovine [43]	Bovine – paralysis of the head and neck, ataxia, swallowing difficulties, dysstasia [107]  Equine – neurological disease: ataxia, tremors, convulsions, recumbency, quadriplegia, anorexia, leukopenia, depression, anaemia, icterus, hyperaesthesia [108].  Human – febrile illness, laboratory-acquired infection [109]
	Kaikalur virus	unassigned	L: MH484297 M: MH484298 S: MH484299	India [110]	Mosquitoes [110]	No reports	No reports
<i>Orthobunyavirus simbuense</i>	Simbu virus	B	L: HE795108 M: HE795109 S: HE795110	South Africa [111], Tanzania [6]	Mosquitoes [111]	No reports	No reports
	Para virus	unassigned	No reports	Argentina [112]	Mosquitoes [112]	No reports	No reports
<i>Orthobunyavirus thimiriense</i>	Thimiri virus	A	L: MH484336 M: MH484337 S: MH484338	India [113], Australia [36]	<i>Culicodes</i> midges [114]	Avian - <i>Ardeola grayii</i> (Indian pond heron) [113]	Chicken embryo – death [22]

Virus species	Virus name	Clade	Accession	Distribution	Insect vectors	Animal hosts	Animal disease (Species, clinical signs, and pathological description)
<i>Orthobunyavirus utingaense</i>	Utinga virus	A	L: KF697154 M: KF697155 S: KF697156	Brazil [115]	No reports	<i>Folivora</i> - sloths [115]	No reports
	Utive virus	A	L: KF697157 M: KF697159 S: KF697158	Panama [74]	No reports	<i>Folivora</i> – sloths [74]	No reports

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