

Table 1. Arboviruses and emerging viral pathogens isolated for the first time in Australia, 1950-2018.

Virus	Isolate	Classification			First isolation			Reference
		Family	Genus	Species	Year	Location	Source	
Edge Hill virus	C281	Flaviviridae	Flavivirus	Edge Hill virus	1961	Cairns, QLD	mosquitoes (<i>Aedes vigilax</i> + <i>Culex annulirostris</i>)	Doherty et al AJEB 1963
Gadgets Gulley virus	CSIRO122	Flaviviridae	Flavivirus	Gadgets Gulley virus	1975	Macquarie Island, TAS	hard ticks (<i>Ixodes uraie</i>)	St. George et al AJTMH 1985
Kokobera virus	MRM32	Flaviviridae	Flavivirus	Kokobera virus	1960	Kowanyama, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEB 1963
Stratford virus	C338	Flaviviridae	Flavivirus	Kokobera virus	1961	Cairns, QLD	mosquitoes (<i>Aedes vigilax</i>)	Doherty et al AJEB 1963
New Mapoon virus	CY1014	Flaviviridae	Flavivirus	Kokobera virus*	1998	Cape York, QLD	mosquito sp.	Nisbet et al JGV 2005
Murray Valley encephalitis virus	152	Flaviviridae	Flavivirus	Murray Valley encephalitis virus	1951	Mooroopna, VIC	human	French MJA 1952
Alfuy virus	MRM3929	Flaviviridae	Flavivirus	Murray Valley encephalitis virus	1966	Kowanyama, QLD	swamp pheasant (<i>Centropus phasianinus</i>)	Whitehead et al TRSTMH 1968
Saumarez Reef virus	CSIRO4	Flaviviridae	Flavivirus	Saumarez Reef virus	1974	Saumarez Reef, QLD	soft ticks (<i>Ornithodoros capensis</i>)	St. George et al AJEBMS 1977
Kunjin virus	MRM16	Flaviviridae	Flavivirus	West Nile virus	1960	Kowanyama, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEB 1963
Finch Creek virus	EB6	Nairoviridae	Nairovirus*	unassigned	2001	Macquarie Island, TAS	hard ticks (<i>Ixodes uraie</i>)	Major et al PLoS One 2009
Vinegar Hill virus	CSIRO1499	Nairoviridae	Nairovirus*	unassigned	1981	Gatton, QLD	soft ticks (<i>Argas robertsi</i>)	Gauci et al Viruses 2017
Upolu virus	C5581	Thogotoviridae	Thogotovirus*	unassigned	1966	Upolu Cay, QLD	soft ticks (<i>Ornithodoros capensis</i>)	Doherty et al AJEB 1969
Cedar virus	CG1a	Paramyxoviridae	Henipavirus	Cedar henipavirus	2009	Cedar Grove, QLD	fruit bats (<i>Pteropus</i> sp.)	Marsh et al PLoS Path 2012
Hendra virus		Paramyxoviridae	Henipavirus	Hendra henipavirus	1994	Brisbane, QLD	horses (<i>Equus ferus caballus</i>)	Murray et al Science 1995
Menangle virus		Paramyxoviridae	Rubulavirus	Menangle rubulavirus	1997	NSW	pigs (<i>Sus scrofa domesticus</i>)	Philbey et al EID 1998
J virus		Paramyxoviridae*	unassigned	unassigned	1972		mouse (<i>Mus musculus</i>)	Jun et al AJEBMS 1977
Mossman virus		Paramyxoviridae*	unassigned	unassigned	1970	Mossman, QLD	rodent (<i>Rattus leucopus</i>)	Campbell et al Search 1977
Belmont virus	R8659	Peribunyaviridae	Orthobunyavirus	unassigned	1968	Rockhampton, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AVJ 1972
Douglas virus	CSIRO150	Peribunyaviridae	Orthobunyavirus	Sathuperi virus	1978	Douglas Station, QLD	bovine (<i>Bos indicus</i>)	St George et al AJEBMS 1979
Facey's Paddock virus	Ch16129	Peribunyaviridae	Orthobunyavirus	Oropouche virus	1974	Charleville, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEBMS 1979
Gan Gan virus	NB6057	Peribunyaviridae	Orthobunyavirus*	unassigned	1970	Nelson Bay, NSW	mosquitoes (<i>Aedes vigilax</i>)	Gard et al AJTMH 1973
Koongol virus	MRM31	Peribunyaviridae	Orthobunyavirus	Koongol orthobunyavirus	1960	Kowanyama, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEB 1963
Kowanyama virus	MRM1178	Peribunyaviridae	Orthobunyavirus*	unassigned	1964	Kowanyama, QLD	mosquitoes (<i>Anopheles annulipes</i>)	Doherty et al TRSTMH 1968a
Leanyer virus	NT16701	Peribunyaviridae	Orthobunyavirus		1974	Leanyer, NT	mosquitoes (<i>Anopheles meraukensis</i>)	Doherty et al AJEBMS 1977
Little Sussex virus	Ch19546	Peribunyaviridae	Orthobunyavirus		1976	Charleville, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEBMS 1979
Maputta virus	MRM186	Peribunyaviridae	Orthobunyavirus*	unassigned	1960	Kowanyama, QLD	mosquitoes (<i>Anopheles meraukensis</i>)	Doherty et al AJEB 1963
Parker's Farm virus	Ch19520	Peribunyaviridae	Orthobunyavirus		1976	Charleville, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEBMS 1979
Peaton virus	CSIRO133	Peribunyaviridae	Orthobunyavirus	Shamonda virus	1976	Peachester, QLD	biting midges (<i>Culicoides brevitatis</i>)	St George et al AJEBMS 1979
Taggert virus	MI14850	Peribunyaviridae	Orthobunyavirus	Sakhalin orthonairovirus	1972	Macquarie Island, TAS	hard ticks (<i>Ixodes uraie</i>)	Doherty et al AJTMH 1975
Termeil virus	BP8090	Peribunyaviridae	Orthobunyavirus*	unassigned	1972	Bawley Point, NSW	mosquitoes (<i>Aedes camptorhynchus</i>)	Marshall et al AJEBMS 1980
Tinaroo virus	CSIRO153	Peribunyaviridae	Orthobunyavirus	Akabane virus	1978	Kiari, QLD	biting midges (<i>Culicoides brevitatis</i>)	St George et al AJEBMS 1979
Trubanaman virus	MRM3630	Peribunyaviridae	Orthobunyavirus*	unassigned	1966	Kowanyama, QLD	mosquitoes (<i>Anopheles annulipes</i>)	Doherty et al TRSTMH 1968a
Wongal virus	MRM168	Peribunyaviridae	Orthobunyavirus	Koongol orthobunyavirus	1960	Kowanyama, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEB 1963
Yacaaba virus	NB6028	Peribunyaviridae	Orthobunyavirus*	unassigned	1970	Nelson Bay, NSW	mosquitoes (<i>Aedes vigilax</i>)	Gard et al AJTMH 1973
Precarious Point virus	MI19334	Phenuiviridae	Phlebovirus	Uukuniemi phlebovirus	1975	Macquarie Island, TAS	hard ticks (<i>Ixodes uraie</i>)	St. George et al AJTMH 1985
Catch-me-cave virus	I2/19	Phenuiviridae	Phlebovirus*	unassigned	2001	Macquarie Island, TAS	hard ticks (<i>Ixodes uraie</i>)	Major et al PLoS One 2009
bluetongue virus type 20	CSIRO19	Reoviridae	Orbivirus	Bluetongue virus	1975	Beatrice Hill, NT	biting midges (<i>Culicoides</i> spp.)	St George et al AVJ 1978
bluetongue virus type 21	CSIRO154	Reoviridae	Orbivirus	Bluetongue virus	1979	Victoria River, NT	bovine (<i>Bos indicus</i>)	St George et al AVJ 1980
Corriparta virus	MRM1	Reoviridae	Orbivirus	Corriparta virus	1960	Kowanyama, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEB 1963
Parry's Lagoon virus	K75749	Reoviridae	Orbivirus	Corriparta virus*	2010	Wyndham, WA	mosquitoes (<i>Culex annulirostris</i>)	Harrison et al Viruses 2016
Eubenangee virus	In1074	Reoviridae	Orbivirus	Eubenangee virus	1963	Innisfail, QLD	mosquitoes (mixed pool)	Doherty et al TRSTMH 1968b
Tilligerry virus	NB7080	Reoviridae	Orbivirus	Eubenangee virus	1971	Nelson Bay, NSW	mosquitoes (<i>Anopheles annulipes</i>)	Gard et al AJTMH 1973
Nugget virus	MI14847	Reoviridae	Orbivirus	Kemerovo virus	1972	Macquarie Island, TAS	hard ticks (<i>Ixodes uraie</i>)	Doherty et al AJTMH 1975
Bunyip Creek virus	CSIRO58	Reoviridae	Orbivirus	Palyam virus	1976	Grafton, NSW	bovine (<i>Bos taurus</i>)	Cybinski & St. George 1982
CSIRO Village virus	CSIRO11	Reoviridae	Orbivirus	Palyam virus	1974	Beatrice Hill, NT	biting midges (<i>Culicoides</i> spp.)	Cybinski & St. George 1982
D'Aguilar virus	B8112	Reoviridae	Orbivirus	Palyam virus	1968	Bunya, QLD	biting midges (<i>Culicoides brevitatis</i>)	Doherty et al AVJ 1972
Marrakai virus	CSIRO82	Reoviridae	Orbivirus	Palyam virus	1975	Beatrice Hill, NT	biting midges (<i>Culicoides schultzei</i> + <i>C. peregrinus</i>)	Cybinski & St. George 1982
Mudjinbarry virus	NT14952	Reoviridae	Orbivirus	Wallal virus	1971	Alligator Rivers, NT	biting midges (<i>Culicoides marksi</i>)	Doherty et al AJBS 1978
Wallal virus	Ch11963	Reoviridae	Orbivirus	Wallal virus	1970	Charleville, QLD	biting midges (<i>Culicoides dycei</i> + <i>C. marksi</i>)	Doherty et al AVJ 1972
Mitchell River virus	MRM10434	Reoviridae	Orbivirus	Warrego virus	1969	Kowanyama, QLD	biting midges (<i>Culicoides</i> spp.)	Doherty et al AVJ 1972
Warrego virus	Ch9935	Reoviridae	Orbivirus	Warrego virus	1969	Charleville, QLD	biting midges (<i>Culicoides</i> spp.)	Doherty et al AVJ 1972
Paroo River virus	GG668	Reoviridae	Orbivirus	Wongorr virus	1973	Wanaaring, NSW	mosquitoes (<i>Culex annulirostris</i>)	Marshall et al AJEBMS 1982
Picola virus	PK886	Reoviridae	Orbivirus	Wongorr virus	1974	Picola, VIC	mosquitoes (<i>Culex annulirostris</i>)	Marshall et al AJEBMS 1982
Wongorr virus	MRM13443	Reoviridae	Orbivirus	Wongorr virus	1970	Kowanyama, QLD	mosquitoes (<i>Aedes lineatopennis</i>)	Doherty et al AVJ 1972
Lake Clarendon virus	CSIRO704	Reoviridae	Orbivirus*	unassigned	1980	Gatton, QLD	soft ticks (<i>Argas robertsi</i>)	St George et al AJBS 1984
Middle Point virus	DPP4440	Reoviridae	Orbivirus*	unassigned	1998	Beatrice Hill, NT	bovine (<i>Bos indicus</i>)	Cowled et al JGV 2007

Sandy Bay virus	F3/4	<i>Reoviridae</i>	<i>Orbivirus*</i>	unassigned	2001	Macquarie Island, TAS	hard ticks (<i>Ixodes uraie</i>)	Major et al PLoS One 2009
Stretch Lagoon virus	K49460	<i>Reoviridae</i>	<i>Orbivirus*</i>	unassigned	2002	Wolfe Creek, WA	mosquitoes (<i>Culex annulirostris</i>)	
Nelson Bay virus	NB847	<i>Reoviridae</i>	<i>Orthoreovirus</i>	<i>Nelson Bay orthoreovirus</i>	1968	Nelson Bay, NSW	fruit bat (<i>Pteropus poliocephalus</i>)	Gard & Marshall ARCH VIROL 1973
Adelaide River virus	DPP61	<i>Rhabdoviridae</i>	<i>Ephemerovirus</i>	<i>Adelaide River ephemerovirus</i>	1981	Tortilla Flats, NT	bovine (<i>Bos indicus</i>)	Gard et al AVJ 1984
Berrimah virus	DPP63	<i>Rhabdoviridae</i>	<i>Ephemerovirus</i>	<i>Berrimah ephemerovirus</i>	1981	Darwin, NT	bovine (<i>Bos indicus</i>)	Gard et al AVJ 1983
Hayes Yard virus	DPP4816	<i>Rhabdoviridae</i>	<i>Ephemerovirus*</i>	unassigned	2000	Beatrice Hill, NT	bovine (<i>Bos indicus</i>)	Blasdell et al in prep
Kimberley virus	OR250	<i>Rhabdoviridae</i>	<i>Ephemerovirus</i>	<i>Kimberley ephemerovirus</i>	1973	Kunnamurra, WA	mosquitoes (<i>Culex annulirostris</i>)	Liehne et al AJEBMS 1981
Koolpinyah virus	DPP819	<i>Rhabdoviridae</i>	<i>Ephemerovirus</i>	<i>Koolpinyah ephemerovirus</i>	1985	Darwin, NT	bovine (<i>Bos indicus</i>)	Gard et al Intervirology 1992
Holmes Jungle virus	DPP1163	<i>Rhabdoviridae</i>	<i>Hapavirus*</i>	unassigned	1987	Darwin, NT	mosquitoes (<i>Culex annulirostris</i>)	Gubala et al Evol Bioinformat 2017
Ngaining virus	MRM14556	<i>Rhabdoviridae</i>	<i>Hapavirus</i>	<i>Ngaining hapavirus</i>	1970	Kowanyama, QLD	biting midges (<i>Culicoides brevitatis</i>)	Doherty et al AVJ 1972
Ord River virus	OR1023	<i>Rhabdoviridae</i>	<i>Hapavirus</i>	<i>Ord River hapavirus</i>	1976	Kunnamurra, WA	mosquitoes (<i>Culex annulirostris</i>)	
Parry's Creek virus	OR189	<i>Rhabdoviridae</i>	<i>Hapavirus</i>	<i>Parry Creek hapavirus</i>	1973	Kunnamurra, WA	mosquitoes (<i>Culex annulirostris</i>)	Liehne et al AJEBMS 1981
Wongabel virus	CSIRO264	<i>Rhabdoviridae</i>	<i>Hapavirus</i>	<i>Wongabel hapavirus</i>	1979	Wongabel, QLD	biting midges (<i>Culicoides austropalpalis</i>)	Gubala et al Virology 2008
Australian bat lyssavirus		<i>Rhabdoviridae</i>	<i>Lyssavirus</i>	<i>Australian bat lyssavirus</i>	1996	Ballina, NSW	fruit bat (<i>Pteropus alecto</i>)	Fraser et al EID 1996
Almpiwar virus	MRM4059	<i>Rhabdoviridae</i>	<i>Sripuvirus</i>	<i>Almpiwar sripuvirus</i>	1966	Kowanyama, QLD	skink (<i>Cryptoblepharus virgatus</i>)	
Humpty Doo virus	CSIRO79	<i>Rhabdoviridae</i>	<i>Sripuvirus*</i>	unassigned	1975	Beatrice Hill, NT	sandflies (<i>Lasiohelia</i> spp.)	Standfast et al AJBS 1984
Beatrice Hill virus	CSIRO25	<i>Rhabdoviridae</i>	<i>Tibrovirus</i>	<i>Beatrice Hill tibrovirus</i>	1975	Beatrice Hill, NT	biting midges (<i>Culicoides peregrinus</i>)	Standfast et al AJBS 1984
Coastal Plains virus	DPP53	<i>Rhabdoviridae</i>	<i>Tibrovirus</i>	<i>Coastal Plains tibrovirus</i>	1981	Palmerston, NT	bovine (<i>Bos taurus</i>)	Cybinski & Gard AJBS 1986
Tibrogargan virus	CSIRO132	<i>Rhabdoviridae</i>	<i>Tibrovirus</i>	<i>Tibrogargan tibrovirus</i>	1976	Peacheater, QLD	biting midges (<i>Culicoides brevitatis</i>)	Cybinski et al Vet Microbiol 1980
Harrison Dam virus	CSIRO75	<i>Rhabdoviridae*</i>	unassigned	unassigned	1975	Beatrice Hill, NT	mosquitoes (<i>Culex annulirostris</i>)	Standfast et al AJBS 1984
Kunnamurra virus	OR194	<i>Rhabdoviridae*</i>	unassigned	unassigned	1973	Kunnamurra, WA	mosquitoes (<i>Aedeomyia catasticta</i>)	Liehne et al AJEBMS 1981
Oak Vale virus	K13965	<i>Rhabdoviridae*</i>	unassigned	unassigned	1993	Kunnamurra, WA	mosquitoes (<i>Anopheles annulipes</i>)	Quan et al Virus Res 2011
Walkabout Creek virus	CSIRO1056	<i>Rhabdoviridae*</i>	unassigned	unassigned	1981	Samford, QLD	biting midges (<i>Culicoides austropalpalis</i>)	McAllister et al Virol Rep 2014
Barmah Forest virus	BH2193	<i>Togaviridae</i>	<i>Alphavirus</i>	<i>Barmah Forest virus</i>	1974	Barmah Forest, VIC	mosquitoes (<i>Culex annulirostris</i>)	Marshall et al AJEBMS 1982
Murweh virus	Ch16313	<i>Togaviridae</i>	<i>Alphavirus</i>	<i>Barmah Forest virus</i>	1974	Charleville, QLD	mosquitoes (<i>Culex annulirostris</i>)	Doherty et al AJEBMS 1979
Ross River virus	T48	<i>Togaviridae</i>	<i>Alphavirus</i>	<i>Ross River virus</i>	1959	Townsville, QLD	mosquitoes (<i>Aedes vigilax</i>)	Doherty et al AJS 1963
Charleville virus	Ch9824	unassigned			1969	Charleville, QLD	sandfly (<i>Phelbotomus</i> sp.)	Doherty et al AVJ 1972
Samford virus = Aino virus								

*presumptive member