

Divergent Rabies Virus Variant of Probable Bat Origin in 2 Gray Foxes, New Mexico, USA

Appendix 2 Table. Isolates sequenced this study and reference sequences used for the analysis*

Isolate	Country	State	County	City	Host source	Year	GenBank accession no.	RABV lineage	Reference
A15-0755; 2015012162	USA	New Mexico	Lincoln	Alto	<i>Urocyon cinereoargenteus</i>	2015	OM202983	Novel New Mexico	This study
A15-1836; 2008000832	USA	New Mexico	Sierra		<i>Urocyon cinereoargenteus</i>	2008	OM202984	Cosmopolitan (AZFX)	This study
A15-1837; 2009000595	USA	New Mexico	Chaves		<i>Mephitis mephitis</i>	2009	OM202985	South-central skunk	This study
A15-1838; 2009001979	USA	New Mexico	Sierra		Bat	2009	OM202986	<i>Eptesicus fuscus</i> -W1	This study
A15-1841; 2010039542	USA	New Mexico	Chaves		<i>Mephitis mephitis</i>	2010	OM202987	South-central skunk	This study
A15-1842; 2011021732	USA	New Mexico	Lincoln		<i>Mephitis mephitis</i>	2011	OM202988	South-central skunk	This study
A15-1843; 2011030508	USA	New Mexico	Chaves		<i>Mephitis mephitis</i>	2011	OM202989	South-central skunk	This study
A16-0745; 2004003088	USA	New Mexico	San Juan		<i>Mephitis mephitis</i>	2004	OM202990	<i>Nyctinomops macrotis</i>	This study
A16-0746; 2008003514	USA	New Mexico	Dona Ana		<i>Urocyon cinereoargenteus</i>	2008	OM202991	Cosmopolitan (AZFX)	This study
A16-0747; 2009002276	USA	New Mexico	Dona Ana		<i>Antrozous pallidus</i>	2009	OM202992	<i>Antrozous pallidus</i>	This study
A16-0748; 2009002549	USA	New Mexico	Dona Ana		<i>Tadarida brasiliensis</i>	2009	OM202993	<i>Tadarida brasiliensis</i>	This study
A16-0749; 2011031485	USA	New Mexico	Dona Ana		<i>Eptesicus fuscus</i>	2011	OM202994	<i>Tadarida brasiliensis</i>	This study
A16-0750; 2012026146	USA	New Mexico	Eddy		<i>Urocyon cinereoargenteus</i>	2012	OM202995	South-central skunk	This study
A16-0751; 2012034852	USA	New Mexico	Eddy		<i>Tadarida brasiliensis</i>	2012	OM202996	<i>Tadarida brasiliensis</i>	This study
A16-0752; 2012036136	USA	New Mexico	Eddy		Bat	2012	OM202997	<i>Tadarida brasiliensis</i>	This study
A16-0753; 2013038564	USA	New Mexico	Valencia		<i>Canis familiaris</i>	2013	OM202998	<i>Nyctinomops macrotis</i>	This study
A16-0754; 2009002942	USA	New Mexico	Otero		Bat	2009	OM202999	<i>Antrozous pallidus</i>	This study
A16-0755; 2015013805	USA	New Mexico	Dona Ana	La Mesa	<i>Tadarida brasiliensis</i>	2015	OM203000	<i>Tadarida brasiliensis</i>	This study
A16-0756; 2015016381	USA	New Mexico	Bernalillo	Albuquerque	<i>Lasiurus cinereus</i>	2015	OM203001	<i>Lasiurus cinereus</i>	This study
A16-0757; 2015018259	USA	New Mexico	Bernalillo	Albuquerque	<i>Tadarida brasiliensis</i>	2015	OM203002	<i>Tadarida brasiliensis</i>	This study
A16-0758; 2015018808	USA	New Mexico	Rio Arriba	Dixon	<i>Lasiurus cinereus</i>	2015	OM203003	<i>Lasiurus cinereus</i>	This study
A16-0759; 2015020795	USA	New Mexico	Rio Arriba	Espanola	<i>Myotis sp</i>	2015	OM203004	<i>Lasiurus cinereus</i>	This study
A16-0760; 2015024056	USA	New Mexico	Taos	Taos	<i>Lasiurus cinereus</i>	2015	OM203005	<i>Lasiurus cinereus</i>	This study
A16-0761; 2015025510	USA	New Mexico	Taos	El Prado	<i>Myotis sp</i>	2015	OM203006	<i>Myotis californicus</i>	This study
A16-0762; 2015027394	USA	New Mexico	Bernalillo	Albuquerque	<i>Myotis sp</i>	2015	OM203007	<i>Myotis californicus</i>	This study
A16-0763; 2015028251	USA	New Mexico	Bernalillo	Albuquerque	<i>Tadarida brasiliensis</i>	2015	OM203008	<i>Tadarida brasiliensis</i>	This study
A16-0764; 2015031004	USA	New Mexico	Eddy	Carlsbad	<i>Lasiurus cinereus</i>	2015	OM203009	<i>Lasiurus cinereus</i>	This study
A16-0765; 2013021240	USA	New Mexico	Eddy		<i>Lasiurus cinereus</i>	2013	OM203010	<i>Lasiurus cinereus</i>	This study
A16-0766; 2015019329	USA	New Mexico	Quay	San Jon	<i>Lasiurus cinereus</i>	2015	OM203011	<i>Lasiurus cinereus</i>	This study
A17-0179; 2011031282	USA	New Mexico	Bernalillo		Bat	2011	OM203012	<i>Myotis californicus</i>	This study
A17-0180; 2011034775	USA	New Mexico	San Miguel		<i>Lasionycteris noctivagans</i>	2011	OM203013	<i>Lasionycteris noctivagans</i>	This study
A19-2238; 2019027361	USA	New Mexico	Lincoln	Capitan	<i>Urocyon cinereoargenteus</i>	2019	OM202982	Novel New Mexico	This study
2015030671	USA	New Mexico	Eddy	Carlsbad	<i>Bassariscus astutus</i>	2015	OM203014	<i>Tadarida brasiliensis</i>	This study
2016005216	USA	New Mexico	De Baca	Fort Sumner	<i>Mephitis</i>	2016	*	South-central skunk	This study
2016008511	USA	New Mexico	De Baca	Fort Sumner	<i>Mephitis mephitis</i>	2016	OM203015	South-central skunk	This study
2016022033	USA	New Mexico	De Baca	Fort Sumner	<i>Mephitis mephitis</i>	2016	OM203016	South-central skunk	This study
2016023718	USA	New Mexico	De Baca	Fort Sumner	<i>Mephitis mephitis</i>	2016	*	South-central skunk	This study
2017017313	USA	New Mexico	Colfax	Raton	<i>Myotis thysanodes</i>	2017	OM203017	<i>Myotis californicus</i>	This study
2017017380	USA	New Mexico	Dona Ana	Las Cruces	<i>Tadarida brasiliensis</i>	2017	*	<i>Tadarida brasiliensis</i>	This study
2017018982	USA	New Mexico	Roosevelt	Portales	<i>Urocyon cinereoargenteus</i>	2017	OM203018	South-central skunk	This study
2017020232	USA	New Mexico	Santa Fe	Edgewood	<i>Eptesicus fuscus</i>	2017	*	<i>Eptesicus fuscus</i> -W1	This study
2017020434	USA	New Mexico	Curry	Clovis	<i>Mephitis mephitis</i>	2017	OM203019	South-central skunk	This study
2017020702	USA	New Mexico	Santa Fe	Espanola	<i>Myotis sp</i>	2017	OM203020	<i>Myotis californicus</i>	This study
2017025341	USA	New Mexico	Colfax	Raton	<i>Mephitis mephitis</i>	2017	*	South-central skunk	This study
2017027177	USA	New Mexico	Santa Fe	Santa Fe	<i>Tadarida brasiliensis</i>	2017	*	<i>Tadarida brasiliensis</i>	This study
2017027736	USA	New Mexico	Hidalgo	Lordsburg	<i>Lynx rufus</i>	2017	*	Cosmopolitan (AZFX)	This study

Isolate	Country	State	County	City	Host source	Year	GenBank accession no.	RABV lineage	Reference
2017029131	USA	New Mexico	Lincoln	Ruidoso	<i>Urocyon cinereoargenteus</i>	2017	OM203021	<i>Eptesicus fuscus</i> -W1	This study
2017029692	USA	New Mexico	Hidalgo	Rodeo	<i>Lynx rufus</i>	2017	OM203022	Cosmopolitan (AZFX)	This study
2017034789	USA	New Mexico	Colfax	Maxwell	<i>Canis latrans</i>	2017	OM203023	South-central skunk	This study
2018001861	USA	New Mexico	Santa Fe	Santa Fe	<i>Mephitis mephitis</i>	2018	OM203024	South-central skunk	This study
2018011578	USA	New Mexico	Colfax	Cimarron	<i>Mephitis mephitis</i>	2018	OM203025	South-central skunk	This study
2018015102	USA	New Mexico	Santa Fe	Santa Fe	<i>Antrozous pallidus</i>	2018	OM203026	<i>Antrozous pallidus</i>	This study
2018015202	USA	New Mexico	Santa Fe	Santa Fe	<i>Mephitis mephitis</i>	2018	*	South-central skunk	This study
2018015604	USA	New Mexico	San Juan	Farmington	<i>Antrozous pallidus</i>	2018	OM203027	<i>Antrozous pallidus</i>	This study
2018018118	USA	New Mexico	De Baca	Fort Sumner	<i>Mephitis mephitis</i>	2018	OM203028	South-central skunk	This study
2018018773	USA	New Mexico	Bernalillo	Albuquerque	<i>Myotis lucifugus</i>	2018	*	<i>Tadarida brasiliensis</i>	This study
2018019209	USA	New Mexico	Santa Fe	Santa Fe	<i>Urocyon cinereoargenteus</i>	2018	OM203029	South-central skunk	This study
2018021859	USA	New Mexico	Dona Ana	Las Cruces	<i>Antrozous pallidus</i>	2018	OM203030	<i>Antrozous pallidus</i>	This study
2018026719	USA	New Mexico	San Juan	Aztec	<i>Nyctinomops macrotis</i>	2018	*	<i>Nyctinomops macrotis</i>	This study
2018028298	USA	New Mexico	Santa Fe	Santa Fe	<i>Mephitis mephitis</i>	2018	OM203031	South-central skunk	This study
2018029020	USA	New Mexico	Eddy	Carlsbad	<i>Tadarida brasiliensis</i>	2018	OM203032	<i>Tadarida brasiliensis</i>	This study
2018029317	USA	New Mexico	Curry	Clovis	<i>Felis catus</i>	2018	OM203033	South-central skunk	This study
2018029975	USA	New Mexico	Rio Arriba	Dulce	<i>Mephitis mephitis</i>	2018	OM203034	<i>Eptesicus fuscus</i> -W1	This study
2018032217	USA	New Mexico	San Juan	Bloomfield	<i>Mephitis mephitis</i>	2018	OM203035	<i>Nyctinomops macrotis</i>	This study
2019002104	USA	New Mexico	Santa Fe	Santa Fe	<i>Urocyon cinereoargenteus</i>	2019	OM203036	<i>Eptesicus fuscus</i> -W1	This study
2019005171	USA	New Mexico	Santa Fe	Santa Fe	<i>Urocyon cinereoargenteus</i>	2019	OM203037	<i>Eptesicus fuscus</i> -W1	This study
2019006128	USA	New Mexico	Santa Fe	Santa Fe	<i>Urocyon cinereoargenteus</i>	2019	OM203038	<i>Eptesicus fuscus</i> -W1	This study
2019007630	USA	New Mexico	Santa Fe	Santa Fe	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019009072	USA	New Mexico	Santa Fe	Santa Fe	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019009563	USA	New Mexico	De Baca	Fort Sumner	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019009681	USA	New Mexico	De Baca	Fort Sumner	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019010065	USA	New Mexico	Quay	Tucumcari	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019011895	USA	New Mexico	Bernalillo	Albuquerque	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019012604	USA	New Mexico	De Baca	Fort Sumner	<i>Urocyon cinereoargenteus</i>	2019	OM203039	South-central skunk	This study
2019013575	USA	New Mexico	De Baca	Fort Sumner	<i>Procyon lotor</i>	2019	*	South-central skunk	This study
2019014195	USA	New Mexico	Curry	Clovis	<i>Urocyon cinereoargenteus</i>	2019	*	South-central skunk	This study
2019015395	USA	New Mexico	Curry	Clovis	<i>Mephitis mephitis</i>	2019	OM203040	South-central skunk	This study
2019016184	USA	New Mexico	Roosevelt	Portales	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019017081	USA	New Mexico	Curry	Clovis	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019019506	USA	New Mexico	Colfax	Angel Fire	<i>Eptesicus fuscus</i>	2019	*	<i>Eptesicus fuscus</i> -W1	This study
2019020776	USA	New Mexico	Curry	Clovis	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019022292	USA	New Mexico	Roosevelt	Portales	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019022293	USA	New Mexico	Roosevelt	Portales	<i>Felis catus</i>	2019	*	South-central skunk	This study
2019023945	USA	New Mexico	Santa Fe	Santa Fe	Bat	2019	OM203041	<i>Eptesicus fuscus</i> -W1	This study
2019024119	USA	New Mexico	Santa Fe	Santa Fe	<i>Antrozous pallidus</i>	2019	*	<i>Antrozous pallidus</i>	This study
2019025160	USA	New Mexico	San Miguel	Las Vegas	Bat	2019	*	<i>Eptesicus fuscus</i> -W1	This study
2019026915	USA	New Mexico	Colfax	Angel Fire	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
2019027778	USA	New Mexico	Rio Arriba	Abiquiu	<i>Nyctinomops macrotis</i>	2019	*	<i>Nyctinomops macrotis</i>	This study
2019027923	USA	New Mexico	Santa Fe	Santa Fe	<i>Urocyon cinereoargenteus</i>	2019	*	<i>Tadarida brasiliensis</i>	This study
2019033570	USA	New Mexico	Curry	Clovis	<i>Mephitis mephitis</i>	2019	*	South-central skunk	This study
SM870	USA	Florida			<i>Lasiurus intermedius</i>	1988	OM203047	<i>Lasiurus intermedius</i>	This study
SM871	USA	Florida			<i>Lasiurus intermedius</i>	1988	OM203048	<i>Lasiurus intermedius</i>	This study
SM873	USA	Florida			<i>Lasiurus intermedius</i>	1988	OM203049	<i>Lasiurus intermedius</i>	This study
A17-0022	USA	Arizona	Pima		<i>Urocyon cinereoargenteus</i>	2017	OM203042	Cosmopolitan (AZFX)	This study
A17-0026	USA	Arizona	Pima		<i>Urocyon cinereoargenteus</i>	2017	OM203043	Cosmopolitan (AZFX)	This study
A17-4105	USA	Arizona	Gila		<i>Urocyon cinereoargenteus</i>	2017	OM203044	Cosmopolitan (AZFX)	This study
A18-0242	USA	Arizona			<i>Canis latrans</i>	2018	OM203045	Cosmopolitan (AZFX)	This study
A19-0377	USA	Arizona			<i>Urocyon cinereoargenteus</i>	2019	OM203046	Cosmopolitan (AZFX)	This study

Isolate	Country	State	County	City	Host source	Year	GenBank accession no.	RABV lineage	Reference
EF31; 89RABL1461	Canada	Saskatchewan			<i>Eptesicus fuscus</i>	1989	AF351831	<i>Eptesicus fuscus</i> - E2	Nadin-Davis, S.A., et al 2001
ML7; 79RABL1020	Canada	Alta			<i>Myotis lucifugus</i>	1979	AF351837	<i>Lasionycteris noctivagans</i>	Nadin-Davis, S.A., et al 2001
LAN13; 80RABN4398	Canada	Ontario			<i>Lasionycteris noctivagans</i>	1980	AF351841	<i>Lasionycteris noctivagans</i>	Nadin-Davis, S.A., et al 2001
EF72; V570	USA	Connecticut			<i>Eptesicus fuscus</i>	1998	AF351854	<i>Eptesicus fuscus</i> - E1	Nadin-Davis, S.A., et al 2001
EF71; V569	USA	Connecticut			<i>Eptesicus fuscus</i>	1998	AF351860	<i>Eptesicus fuscus</i> - E1	Nadin-Davis, S.A., et al 2001
EF3; 72R4744	Canada	Ontario			<i>Eptesicus fuscus</i>	1972	AF351861	<i>Eptesicus fuscus</i> - E2	Nadin-Davis, S.A., et al 2001
2253	USA	California			<i>Antrozous pallidus</i>	1993	AF394869	<i>Antrozous pallidus</i>	Rodhe, R.E. et al, 2004
1566	USA	California	Pluma		<i>Myotis californicus</i>	1987	AF394871	<i>Myotis californicus</i>	Rohde, R.E., et al 2004
872	USA	Florida	Sarasota		<i>Lasiurus intermedius</i>	1988	AF394878	<i>Lasiurus intermedius</i>	Rodhe, R.E. et al, 2004
2247	USA	California			<i>Homo sapiens</i>	1994	AF394879	<i>Lasionycteris noctivagans</i>	Rodhe, R.E. et al, 2004
2152	USA	New York	Westchester		<i>Lasionycteris noctivagans</i>	1984	AF394880	<i>Lasionycteris noctivagans</i>	Rodhe, R.E. et al, 2004
1435	USA	Arkansas	Houston		<i>Pipistrellus subflavus</i>	1991	AF394881	<i>Perimyotis subflavus</i>	Rodhe, R.E. et al, 2004
2698	USA	Tennessee			<i>Homo sapiens</i>	1994	AF394882	<i>Perimyotis subflavus</i>	Rodhe, R.E. et al, 2004
446	USA	Georgia	Clayton		<i>Lasiurus cinereus</i>	1982	AF394884	<i>Lasiurus cinereus</i>	Rodhe, R.E. et al, 2004
885	USA	Florida	Escambia		<i>Lasiurus borealis</i>	1988	AF394885	<i>Lasiurus borealis</i>	Rodhe, R.E. et al, 2004
2085	USA	Texas	Walker		<i>Lasiurus borealis</i>	1986	AF394886	<i>Lasiurus borealis</i>	Rodhe, R.E. et al, 2004
804	USA	California	Lake		<i>Eptesicus fuscus</i>	1987	AF394887	<i>Eptesicus fuscus</i> -W2	Rodhe, R.E. et al, 2004
136	USA	Pennsylvania	Perry		<i>Eptesicus fuscus</i>	1984	AY039226	<i>Eptesicus fuscus</i> - E1	Rodhe, R.E. et al, 2004
2049	USA	Colorado	El Paso		<i>Eptesicus fuscus</i>	1985	AY039228	<i>Eptesicus fuscus</i> - E2	Rohde, R.E., et al 2004
132	USA	Pennsylvania	Adams		<i>Eptesicus fuscus</i>	1984	AY039229	<i>Eptesicus fuscus</i> - E2	Rohde, R.E., et al 2004
3659	USA	Arizona	Flagstaff		<i>Nyctinomops macrotis</i>	1997	AY170304	<i>Nyctinomops macrotis</i>	Leslie, M.J., et al 2006
SHBRV-18	USA					NA	AY705373	<i>Lasionycteris noctivagans</i>	Faber, M., et al 2004
conm5293	USA	Colorado			<i>Nyctinomops macrotis</i>	NA	AY960093	<i>Nyctinomops macrotis</i>	Shankar, V., et al 2005
A033756NYrac1584	USA	New York	Westchester		<i>Procyon lotor</i>	2003	DQ886041	Eastern raccoon	Biek, R., et al, 2007
PA23	USA	Pennsylvania	Fulton		<i>Procyon lotor</i>	2004	EF508139	Eastern raccoon	Biek, R., et al, 2007
V211	USA	Texas			<i>Mephitis mephitis</i>	1994	EU345002	South-central skunk	Szanto, A., et al, 2007, unpub. data
NewMexicoDG2006	USA	New Mexico			<i>Canis familiaris</i>	2006	FJ228487	<i>Tadarida brasiliensis</i>	Velasco-Villa, A., et al 2008
2153Salvhm02	USA				<i>Homo sapiens</i>	2002	FJ228492	<i>Desmodus rotundus</i>	Velasco-Villa, A., et al 2008
3901Mxmichbv03	Mexico	Michoacan			<i>Bos taurus</i>	2003	FJ228493	<i>Desmodus rotundus</i>	Velasco-Villa, A., et al 2008
412Mxyucdg02	Mexico	Yucatan			<i>Canis familiaris</i>	2002	FJ228525	Cosmopolitan (Dog)	Velasco-Villa, A., et al 2008
FLdg1994	USA	Florida			<i>Canis familiaris</i>	1994	FJ228528	Cosmopolitan (Dog)	Velasco-Villa, A., et al 2008
H2USTXWillcy98	USA	Texas			<i>Canis latrans</i>	1998	FJ228530	Cosmopolitan (Dog)	Velasco-Villa, A., et al 2008
DgNYKprwsky1950	USA	New York			<i>Canis familiaris</i>	1950	FJ228535	Cosmopolitan (Dog)	Velasco-Villa, A., et al 2008
TX692007	USA	Texas			<i>Canis latrans</i>	2007	FJ228536	Cosmopolitan (TXFX)	Velasco-Villa, A., et al 2008
TX672007	USA	Texas			<i>Urocyon cinereoargenteus</i>	2007	FJ228538	Cosmopolitan (TXFX)	Velasco-Villa, A., et al 2008
3148Mxchihbct94	Mexico	Chihuahua			<i>Lynx rufus</i>	1994	FJ228542	Cosmopolitan (AZFX)	Velasco-Villa, A., et al 2008
AZ1968	USA	Arizona			<i>Eptesicus fuscus</i>	2004	GU644642	<i>Eptesicus fuscus</i> -W1	Stricker, D.G., et al 2010
AZ7590	USA	Arizona			<i>Eptesicus fuscus</i>	2005	GU644643	<i>Lasiurus xanthinus</i>	Stricker, D.G., et al 2010
CA29	USA	California			<i>Eptesicus fuscus</i>	2002	GU644645	<i>Eptesicus fuscus</i> -W2	Stricker, D.G., et al 2010
IA381	USA	Iowa			<i>Eptesicus fuscus</i>	2005	GU644655	<i>Eptesicus fuscus</i> - E2	Stricker, D.G., et al 2010
MI1865	USA	Michigan			<i>Eptesicus fuscus</i>	2005	GU644667	<i>Eptesicus fuscus</i> - E2	Stricker, D.G., et al 2010
WA1833	USA	Washington			<i>Eptesicus fuscus</i>	2005	GU644693	<i>Eptesicus fuscus</i> -W2	Stricker, D.G., et al 2010
WA2017	USA	Washington			<i>Eptesicus fuscus</i>	2005	GU644695	<i>Eptesicus fuscus</i> - E2	Stricker, D.G., et al 2010
FL701	USA	Florida			<i>Lasiurus borealis</i>	2003	GU644698	<i>Lasiurus seminolus</i>	Stricker, D.G., et al 2010
TN33	USA	Tennessee			<i>Lasiurus borealis</i>	2004	GU644705	<i>Lasiurus borealis</i>	Stricker, D.G., et al 2010
TX6070	USA	Texas			<i>Lasiurus borealis</i>	2003	GU644707	<i>Lasiurus borealis</i>	Stricker, D.G., et al 2010
TX5276	USA	Texas			<i>Lasiurus borealis</i>	2004	GU644709	<i>Lasiurus borealis</i>	Stricker, D.G., et al 2010
AZ1838	USA	Arizona			<i>Lasiurus cinereus</i>	2005	GU644712	<i>Lasiurus cinereus</i>	Stricker, D.G., et al 2010

Isolate	Country	State	County	City	Host source	Year	GenBank accession no.	RABV lineage	Reference
ID7227	USA	Idaho			<i>Lasiurus cinereus</i>	2005	GU644715	<i>Lasiurus cinereus</i>	Stricker, D.G., et al 2010
FL1024	USA	Florida			<i>Lasiurus intermedius</i>	2001	GU644722	<i>Lasiurus intermedius</i>	Stricker, D.G., et al 2010
FL905	USA	Florida			<i>Lasiurus intermedius</i>	2001	GU644724	<i>Lasiurus intermedius</i>	Stricker, D.G., et al 2010
FL978	USA	Florida			<i>Lasiurus intermedius</i>	2001	GU644725	<i>Lasiurus intermedius</i>	Stricker, D.G., et al 2010
FL1165	USA	Florida			<i>Lasiurus intermedius</i>	2004	GU644726	<i>Lasiurus intermedius</i>	Stricker, D.G., et al 2010
TX5433	USA	Texas			<i>Lasiurus intermedius</i>	2003	GU644728	<i>Lasiurus xanthinus</i>	Stricker, D.G., et al 2010
ID7376	USA	Idaho			<i>Lasionycteris noctivagans</i>	2005	GU644730	<i>Lasiurus cinereus</i>	Stricker, D.G., et al 2010
GA7034	USA	Georgia			<i>Lasiurus seminolus</i>	2003	GU644732	<i>Lasiurus seminolus</i>	Stricker, D.G., et al 2010
TX5850	USA	Texas			<i>Lasiurus seminolus</i>	2002	GU644736	<i>Lasiurus borealis</i>	Stricker, D.G., et al 2010
TX6127	USA	Texas			<i>Lasiurus seminolus</i>	2003	GU644737	<i>Lasiurus borealis</i>	Stricker, D.G., et al 2010
CA06	USA	California			<i>Lasiurus xanthinus</i>	2004	GU644740	<i>Lasiurus xanthinus</i>	Stricker, D.G., et al 2010
ID7198	USA	Idaho			<i>Myotis californicus</i>	2005	GU644743	<i>Myotis californicus</i>	Stricker, D.G., et al 2010
WA1502	USA	Washington			<i>Myotis californicus</i>	2004	GU644745	<i>Myotis californicus</i>	Stricker, D.G., et al 2010
MI1100	USA	Michigan			<i>Myotis lucifugus</i>	2005	GU644748	<i>Lasionycteris noctivagans</i>	Stricker, D.G., et al 2010
AZ2857	USA	Arizona			<i>Myotis yumanensis</i>	2004	GU644751	<i>Myotis yumanensis</i>	Stricker, D.G., et al 2010
CA828	USA	California			<i>Myotis yumanensis</i>	2004	GU644752	<i>Myotis yumanensis</i>	Stricker, D.G., et al 2010
IN1657	USA	Indiana			<i>Pipistrellus subflavus</i>	2004	GU644757	<i>Perimyotis subflavus</i>	Stricker, D.G., et al 2010
TX5168	USA	Texas			<i>Pipistrellus subflavus</i>	2004	GU644758	<i>Perimyotis subflavus</i>	Stricker, D.G., et al 2010
MS076	USA	Mississippi			<i>Tadarida brasiliensis</i>	2004	GU644782	<i>Tadarida brasiliensis</i>	Stricker, D.G., et al 2010
NMBAT2007	USA	New Mexico			<i>Tadarida brasiliensis</i>	2007	GU991831	<i>Tadarida brasiliensis</i>	Velasco-Villa,A. and Rupperecht, C.E, 2016 unpub. data
TXdg1968	USA	Texas			<i>Canis familiaris</i>	1968	GU991837	South-central skunk	Velasco-Villa,A. and Rupperecht, C.E, 2016, unpub. data
H01/08	Colombia				<i>Homo sapiens</i>	2008	JF693456	<i>Desmodus rotundus</i>	Caicedo,Y., et al 2015
WA1185	USA	Washington			<i>Lasionycteris noctivagans</i>	2003	JQ595315	<i>Lasionycteris noctivagans</i>	Streicker, D.G., et al 2012
WA1066	USA	Washington			<i>Lasionycteris noctivagans</i>	2003	JQ595316	<i>Lasionycteris noctivagans</i>	Streicker, D.G., et al 2012
CA982	USA	California			<i>Mephitis mephitis</i>	1994	JQ685894	Cosmopolitan (CASK)	Kuzmin,I.V., et al 2012
WA1185	USA	Washington			<i>Lasionycteris noctivagans</i>	2003	JQ685895	<i>Lasionycteris noctivagans</i>	Kuzmin,I.V., et al 2012
SM5442	USA	Arizona	Flagstaff		<i>Eptesicus fuscus</i>	2001	JQ685897	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
A10-0515	USA	Arizona			<i>Urocyon</i>	2009	JQ685899	Cosmopolitan (AZFX)	Kuzmin,I.V., et al 2012
FL769	USA	Florida			<i>cinereoargenteus</i>				
TN209	USA	Tennessee			<i>Lasiurus seminolus</i>	2003	JQ685900	<i>Lasiurus seminolus</i>	Kuzmin,I.V., et al 2012
CA04148	USA	California			<i>Lasiurus borealis</i>	2005	JQ685902	<i>Lasiurus borealis</i>	Kuzmin,I.V., et al 2012
CA100	USA	California			<i>Eptesicus fuscus</i>	2004	JQ685903	<i>Eptesicus fuscus</i> -W2	Kuzmin,I.V., et al 2012
TX5960	USA	Texas			<i>Eptesicus fuscus</i>	2005	JQ685909	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
SM5077	USA	Arizona	Flagstaff		<i>Lasiurus xanthinus</i>	2002	JQ685910	<i>Lasiurus xanthinus</i>	Kuzmin,I.V., et al 2012
TX4904	USA	Arizona	Flagstaff		<i>Mephitis mephitis</i>	2001	JQ685911	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
FL1010	USA	Texas			<i>Lasiurus intermedius</i>	2002	JQ685915	<i>Lasiurus intermedius</i>	Kuzmin,I.V., et al 2012
CO-Coyot-2010	USA	Florida			<i>Lasiurus intermedius</i>	2002	JQ685916	<i>Lasiurus intermedius</i>	Kuzmin,I.V., et al 2012
NJ2262	USA	Colorado			<i>Eptesicus fuscus</i>	2010	JQ685917	<i>Eptesicus fuscus</i> -W2	Kuzmin,I.V., et al 2012
EF	USA	New Jersey			<i>Lasiurus borealis</i>	2005	JQ685919	<i>Lasiurus borealis</i>	Kuzmin,I.V., et al 2012
TN186	USA	Pennsylvania			<i>Eptesicus fuscus</i>	1984	JQ685920	<i>Eptesicus fuscus</i> - E1	Kuzmin,I.V., et al 2012
WAEF03	USA	Tennessee			<i>Pipistrellus subflavus</i>	2005	JQ685922	<i>Perimyotis subflavus</i>	Kuzmin,I.V., et al 2012
2403	USA	Washington			<i>Eptesicus fuscus</i>	2004	JQ685925	<i>Eptesicus fuscus</i> - E2	Kuzmin,I.V., et al 2012
WA0173	USA	Arizona	Flagstaff		<i>Urocyon</i>	2009	JQ685928	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
A10-0514	USA	<i>cinereoargenteus</i>			<i>Eptesicus fuscus</i>	2000	JQ685931	<i>Eptesicus fuscus</i> -W2	Kuzmin,I.V., et al 2012
AZBAT65094	USA	Washington			<i>Mephitis mephitis</i>	2009	JQ685938	South-central skunk	Kuzmin,I.V., et al 2012
A10-0511	USA	Arizona			<i>Eptesicus fuscus</i>	1981	JQ685942	<i>Eptesicus fuscus</i> -W2	Kuzmin,I.V., et al 2012
NC839	USA	Arizona	Flagstaff		<i>Urocyon</i>	2009	JQ685943	Cosmopolitan (AZFX)	Kuzmin,I.V., et al 2012
SM4862	USA	Tennessee			<i>cinereoargenteus</i>				
TN310	USA	Arizona	Flagstaff		<i>Mephitis mephitis</i>	1984	JQ685944	Cosmopolitan (NCSK)	Kuzmin,I.V., et al 2012
A093504	USA	Arizona	Flagstaff		<i>Eptesicus fuscus</i>	1999	JQ685946	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
SM5101	USA	Tennessee			<i>Lasiurus cinereus</i>	2004	JQ685947	<i>Lasiurus cinereus</i>	Kuzmin,I.V., et al 2012
SM4872	USA	Arizona	Flagstaff		<i>Eptesicus fuscus</i>	2001	JQ685950	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
A10-0512	USA	Arizona	Flagstaff		<i>Mephitis mephitis</i>	2001	JQ685958	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
CASK2	USA	Arizona	Flagstaff		<i>Eptesicus fuscus</i>	2001	JQ685960	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
AZ3003	USA	Arizona	Flagstaff		<i>Eptesicus fuscus</i>	2001	JQ685960	<i>Eptesicus fuscus</i> -W1	Kuzmin,I.V., et al 2012
	USA	California			<i>Mephitis mephitis</i>	2009	JQ685968	South-central skunk	Kuzmin,I.V., et al 2012
	USA	California			<i>Mephitis mephitis</i>	1974	JQ685970	Cosmopolitan (CASK)	Kuzmin,I.V., et al 2012
	USA	Arizona			<i>Antrozous pallidus</i>	2009	JQ685971	<i>Antrozous pallidus</i>	Kuzmin,I.V., et al 2012

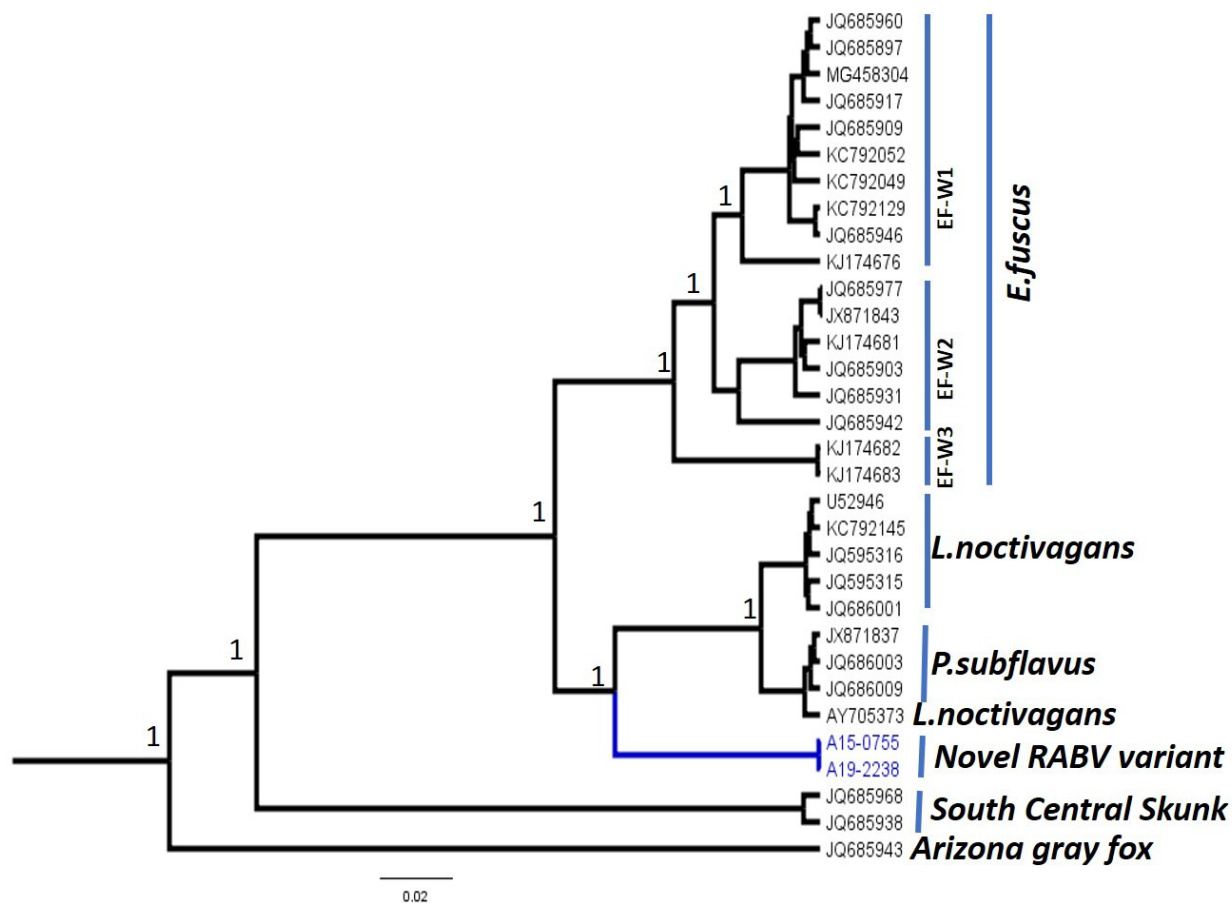
Isolate	Country	State	County	City	Host source	Year	GenBank accession no.	RABV lineage	Reference
OR58	USA	Oregon			<i>Urocyon cinereoargenteus</i>	2010	JQ685977	<i>Eptesicus fuscus</i> -W2	Kuzmin,I.V., et al 2012
AW3565	USA	Alabama			<i>Lasionycteris noctivagans</i>	2010	JQ686001	<i>Lasionycteris noctivagans</i>	Kuzmin,I.V., et al 2012
A10-5102	USA	North Carolina			<i>Perimyotis subflavus</i>	2010	JQ686003	<i>Perimyotis subflavus</i>	Kuzmin,I.V., et al 2012
A11-5737	USA	Virginia			<i>Vulpes vulpes</i>	2011	JQ686009	<i>Perimyotis subflavus</i>	Kuzmin,I.V., et al 2012
ARDG090042	USA	Arkansas			<i>Canis familiaris</i>	2009	JX855994	Cosmopolitan (NCSK)	Davis,R., et al, 2013
SDSK090045	USA	South Dakota			<i>Mephitis mephitis</i>	2009	JX855997	Cosmopolitan (NCSK)	Davis,R., et al, 2013
ARSK090068	USA	Arkansas			<i>Mephitis mephitis</i>	2009	JX856015	South-central skunk	Davis,R., et al, 2013
OKBV090073	USA	Oklahoma			<i>Bos taurus</i>	2009	JX856017	South-central skunk	Davis,R., et al, 2013
NEBV090102	USA	Nebraska			<i>Bos taurus</i>	2009	JX856036	South-central skunk	Davis,R., et al, 2013
A08-1210	USA				<i>Lasionycteris noctivagans</i>	2008	JX871837	<i>Perimyotis subflavus</i>	Ellison,J.A., et al 2013
A10-2057	USA				<i>Eptesicus fuscus</i>	2010	JX871843	<i>Eptesicus fuscus</i> -W2	Ellison,J.A., et al 2013
A12-0276	USA				<i>Urocyon cinereoargenteus</i>	2012	KC792049	<i>Eptesicus fuscus</i> -W1	Kuzmina,N.A., et al 2013
A12-0331	USA				Bat	2012	KC792052	<i>Eptesicus fuscus</i> -W1	Kuzmina,N.A., et al 2013
A12-4122	USA				<i>Eptesicus fuscus</i>	2012	KC792129	<i>Eptesicus fuscus</i> -W1	Kuzmina,N.A., et al 2013
A12-6377	USA				Bat	2012	KC792145	<i>Lasionycteris noctivagans</i>	Kuzmina,N.A., et al 2013
A13-3207	USA				<i>Eptesicus fuscus</i>	2012	KJ174676	<i>Eptesicus fuscus</i> -W1	Kuzmina,N.A., et al, unpub. data
A13-4551	USA				<i>Urocyon cinereoargenteus</i>	2012	KJ174681	<i>Eptesicus fuscus</i> -W2	Kuzmina,N.A., et al, unpub. data
A13-4546	USA				<i>Myotis lucifugus</i>	2012	KJ174682	<i>Eptesicus fuscus</i> -W3	Kuzmina,N.A., et al., unpub. data
A13-5626	USA				<i>Canis latrans</i>	2012	KJ174683	<i>Eptesicus fuscus</i> -W3	Kuzmina,N.A., et al, unpub. data
IP 350/10	Brazil				<i>Nyctinomops laticaudatus</i>	2010	KM594034	<i>Nyctinomops laticaudatus</i>	Oliveira, R.N. et al, 2014, unpub data
IP 542/10	Brazil				<i>Nyctinomops laticaudatus</i>	2010	KM594036	<i>Nyctinomops laticaudatus</i>	Oliveira, R.N. et al, 2014, unpub. data
05BC0708	Canada	Brackendale			<i>Myotis californicus</i>	2005	KY203100	<i>Myotis californicus</i>	Nadin-Davis,S.A., et al 2017
05BC0983	Canada	Summerland			<i>Myotis californicus</i>	2005	KY203103	<i>Myotis californicus</i>	Nadin-Davis,S.A., et al 2017
05ON2859	Canada				<i>Lasionycteris noctivagans</i>	2005	KY203107	<i>Lasionycteris noctivagans</i>	Nadin-Davis,S., et al, 2017
06ON0035	Canada				<i>Myotis leibii</i>	2006	KY203114	<i>Lasiurus seminolus</i>	Nadin-Davis,S., et al, 2017
RV50	USA				Bat	1975	MG458304	<i>Eptesicus fuscus</i> -W1	Fisher,S., et al 2018
A17-4052	USA	Oregon			Bat	2017	MW055098	<i>Eptesicus fuscus</i> - E2	Gigante,C.M., et al 2020
SHBRV	USA				<i>Lasionycteris noctivagans</i>	NA	U52946	<i>Lasionycteris noctivagans</i>	Morimoto,K., et al 1996

*Isolates not submitted to GenBank because of the length of the sequence was <200 bp. NA, not available; *numbers are not yet available.

References

1. Nadin-Davis SA, Huang W, Armstrong J, Casey GA, Bahloul C, Tordo N, et al. Antigenic and genetic divergence of rabies viruses from bat species indigenous to Canada. *Virus Res.* 2001;74:139–56. [PubMed](#)
[https://doi.org/10.1016/S0168-1702\(00\)00259-8](https://doi.org/10.1016/S0168-1702(00)00259-8)
2. Rohde RE, Mayes BC, Smith JS, Neill SU. Bat rabies, Texas, 1996–2000. *Emerg Infect Dis.* 2004;10:948–52.
[PubMed](#) <https://doi.org/10.3201/eid1005.030719>
3. Leslie MJ, Messenger S, Rohde RE, Smith J, Cheshier R, Hanlon C, et al. Bat-associated rabies virus in Skunks. *Emerg Infect Dis.* 2006;12:1274–7. [PubMed](#) <https://doi.org/10.3201/eid1208.051526>
4. Faber M, Pulmanausahakul R, Nagao K, Prośniak M, Rice AB, Koprowski H, et al. Identification of viral genomic elements responsible for rabies virus neuroinvasiveness. *Proc Natl Acad Sci U S A.* 2004;101:16328–32.
[PubMed](#) <https://doi.org/10.1073/pnas.0407289101>
5. Shankar V, Orciari LA, De Mattos C, Kuzmin IV, Pape WJ, O’Shea TJ, et al. Genetic divergence of rabies viruses from bat species of Colorado, USA. *Vector Borne Zoonotic Dis.* 2005;5:330–41. [PubMed](#)
<https://doi.org/10.1089/vbz.2005.5.330>
6. Biek R, Henderson JC, Waller LA, Rupprecht CE, Real LA. A high-resolution genetic signature of demographic and spatial expansion in epizootic rabies virus. *Proc Natl Acad Sci U S A.* 2007;104:7993–8. [PubMed](#)
<https://doi.org/10.1073/pnas.0700741104>
7. Davis R, Nadin-Davis SA, Moore M, Hanlon C. Genetic characterization and phylogenetic analysis of skunk-associated rabies viruses in North America with special emphasis on the central plains. *Virus Res.* 2013;174:27–36. [PubMed](#) <https://doi.org/10.1016/j.virusres.2013.02.008>
8. Velasco-Villa A, Reeder SA, Orciari LA, Yager PA, Franka R, Blanton JD, et al. Enzootic rabies elimination from dogs and reemergence in wild terrestrial carnivores, United States. *Emerg Infect Dis.* 2008;14:1849–54.
[PubMed](#) <https://doi.org/10.3201/eid1412.080876>
9. Streicker DG, Turmelle AS, Vonhof MJ, Kuzmin IV, McCracken GF, Rupprecht CE. Host phylogeny constrains cross-species emergence and establishment of rabies virus in bats. *Science.* 2010;329:676–9. [PubMed](#)
<https://doi.org/10.1126/science.1188836>
10. Aréchiga-Ceballos N, Velasco-Villa A, Shi M, Flores-Chávez S, Barrón B, Cuevas-Domínguez E, et al. New rabies virus variant found during an epizootic in white-nosed coatis from the Yucatan Peninsula. *Epidemiol Infect.* 2010;138:1586–9. [PubMed](#) <https://doi.org/10.1017/S0950268810000762>
11. Caicedo Y, Paez A, Kuzmin I, Niezgodka M, Orciari LA, Yager PA, et al. Virology, immunology and pathology of human rabies during treatment. *Pediatr Infect Dis J.* 2015;34:520–8. [PubMed](#)
<https://doi.org/10.1097/INF.0000000000000624>
12. Streicker DG, Altizer SM, Velasco-Villa A, Rupprecht CE. Variable evolutionary routes to host establishment across repeated rabies virus host shifts among bats. *Proc Natl Acad Sci U S A.* 2012;109:19715–20. [PubMed](#)
<https://doi.org/10.1073/pnas.1203456109>
13. Kuzmin IV, Shi M, Orciari LA, Yager PA, Velasco-Villa A, Kuzmina NA, et al. Molecular inferences suggest multiple host shifts of rabies viruses from bats to mesocarnivores in Arizona during 2001–2009. *PLoS Pathog.* 2012;8:e1002786. [PubMed](#) <https://doi.org/10.1371/journal.ppat.1002786>
14. Ellison JA, Johnson SR, Kuzmina N, Gilbert A, Carson WC, VerCauteren KC, et al. Multidisciplinary approach to epizootiology and pathogenesis of bat rabies viruses in the United States. *Zoonoses Public Health.* 2013;60:46–57. [PubMed](#) <https://doi.org/10.1111/zph.12019>
15. Kuzima NA, Kuzmin IV, Ellison JA, Rupprecht CE. Conservation of binding epitopes for monoclonal antibodies on the rabies virus glycoprotein. *J Antivir Antiretrovir.* 2013;5:2.

16. Oliveira RN, Freire CC, Iamarino A, Zanotto PM, Pessoa R, Sanabani SS, et al. Rabies virus diversification in aerial and terrestrial mammals. *Genet Mol Biol.* 2020;43:e20190370–20190370. [PubMed](https://doi.org/10.1590/1678-4685-gmb-2019-0370) <https://doi.org/10.1590/1678-4685-gmb-2019-0370>
17. Nadin-Davis S, Alnabelseya N, Knowles MK. The phylogeography of *Myotis* bat-associated rabies viruses across Canada. *PLoS Negl Trop Dis.* 2017;11:e0005541. [PubMed](https://doi.org/10.1371/journal.pntd.0005541) <https://doi.org/10.1371/journal.pntd.0005541>
18. Fischer S, Freuling CM, Müller T, Pfaff F, Bodenhofer U, Höper D, et al. Defining objective clusters for rabies virus sequences using affinity propagation clustering. *PLoS Negl Trop Dis.* 2018;12:e0006182. [PubMed](https://doi.org/10.1371/journal.pntd.0006182) <https://doi.org/10.1371/journal.pntd.0006182>
19. Gigante CM, Yale G, Condori RE, Costa NC, Long NV, Minh PQ, et al. Portable rabies virus sequencing in canine rabies endemic countries using the Oxford Nanopore MinION. *Viruses.* 2020;12:1255. [PubMed](https://doi.org/10.3390/v12111255) <https://doi.org/10.3390/v12111255>
20. Morimoto K, Patel M, Corisdeo S, Hooper DC, Fu ZF, Rupprecht CE, et al. Characterization of a unique variant of bat rabies virus responsible for newly emerging human cases in North America. *Proc Natl Acad Sci U S A.* 1996;93:5653–8. [PubMed](https://doi.org/10.1073/pnas.93.11.5653) <https://doi.org/10.1073/pnas.93.11.5653>



Appendix 2 Figure. Maximum clade credibility tree using full glycoprotein gene sequences of the novel rabies virus variant in blue and representative sequences of RABV associated with terrestrial mammals and bats (*Lasionycteris noctivagans*, *Perimyotis subflavus*, and *Eptesicus fuscus*). RABV, rabies virus.