

Table S1 Horses that were seropositive for WNV and SLEV in RJ.

Sample ID	Collection date	Sex	Activities	Age group	Mesoregions	Municipalities	PRNT90 titer						Interpretation
							WNV	SLEV	ZIKV	DENV-1	ILH		
2	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	<10	20	<10	<10	<10	SLEV	
6	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	<10	20	<10	<10	<10	SLEV	
9	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	10	40	<10	<10	<10	SLEV	
16	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	10	40	<10	<10	<10	SLEV	
22	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	<10	20	<10	<10	<10	SLEV	
23	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	<10	80	<10	<10	<10	SLEV	
24	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	320	40	<10	<10	<10	WNV	
29	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	<10	40	<10	<10	<10	SLEV	
31	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	<10	40	<10	<10	<10	SLEV	
34	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	10	40	<10	<10	<10	SLEV	
38	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	<10	20	<10	<10	<10	SLEV	
43	January, 2016	F	Reproduction	G 3	North Fluminense	Macaé	10	160	<10	<10	<10	SLEV	
44	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	<10	20	<10	<10	<10	SLEV	
45	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	<10	80	<10	<10	<10	SLEV	
48	March, 2016	F	Reproduction	G 4	North Fluminense	São Fidélis	<10	40	<10	<10	<10	SLEV	
51	March, 2016	F	Reproduction	G 4	North Fluminense	São Fidélis	<10	160	<10	<10	<10	SLEV	
52	March, 2016	F	Sports	G 2	North Fluminense	São Fidélis	10	40	<10	<10	<10	SLEV	
53	March, 2016	F	Reproduction	G 3	North Fluminense	São Fidélis	10	80	<10	<10	<10	SLEV	
56	March, 2016	F	Sports	G 4	North Fluminense	São Fidélis	<10	40	NA	NA	NA	SLEV	

59	March, 2016	F	Sports	G 4	North Fluminense	São Fidélis	<10	20	<10	<10	<10	SLEV
70	March, 2016	M	Sports	G 2	North Fluminense	São Fidélis	<10	40	<10	<10	<10	SLEV
71	April, 2016	F	Reproduction	G 4	North Fluminense	Campos dos Goytacazes	<10	160	<10	<10	<10	SLEV
74	April, 2016	M	Reproduction	G 4	North Fluminense	Campos dos Goytacazes	20	80	<10	<10	<10	SLEV
75	April, 2016	M	Reproduction	G 4	North Fluminense	Campos dos Goytacazes	10	160	<10	<10	<10	SLEV
78	April, 2016	F	Reproduction	G 5	Northwest Fluminense	Bom Jesus do Itabapoana	10	80	<10	<10	<10	SLEV
82	April, 2016	F	Recreation	G 5	Northwest Fluminense	Bom Jesus do Itabapoana	<10	160	<10	<10	<10	SLEV
87	April, 2016	F	Recreation	G 1	Northwest Fluminense	Bom Jesus do Itabapoana	<10	40	<10	<10	<10	SLEV
88	April, 2016	F	Recreation	G 5	Northwest Fluminense	Bom Jesus do Itabapoana	<10	40	<10	<10	<10	SLEV
90	April, 2016	F	Recreation	G 4	Northwest Fluminense	Bom Jesus do Itabapoana	<10	80	<10	<10	<10	SLEV
92	April, 2016	f	Recreation	G 5	Northwest Fluminense	Bom Jesus do Itabapoana	<10	160	<10	<10	<10	SLEV
96	April, 2016	F	Sports	G 3	Northwest Fluminense	Bom Jesus do Itabapoana	10	40	<10	<10	<10	SLEV
106	April, 2016	F	Reproduction	G 4	Northwest Fluminense	Bom Jesus do Itabapoana	<10	80	<10	<10	<10	SLEV
108	May, 2016	M	Sports	G 4	Northwest Fluminense	Itaperuna	<10	160	<10	<10	<10	SLEV
109	May, 2016	F	Reproduction	G 5	Northwest Fluminense	Itaperuna	<10	80	<10	<10	<10	SLEV
116	May, 2016	F	Sports	G 4	Northwest Fluminense	Itaperuna	10	80	<10	<10	<10	SLEV
121	May, 2016	M	Sports	G 3	Northwest Fluminense	Itaperuna	10	160	<10	<10	<10	SLEV

123	May, 2016	M	Sports	G 2	Northwest Fluminense	Itaperuna	<10	320	<10	<10	<10	SLEV
124	May, 2016	F	Reproduction	G 4	Northwest Fluminense	Itaperuna	<10	40	<10	<10	<10	SLEV
125	May, 2016	M	Sports	G 3	Northwest Fluminense	Itaperuna	<10	20	<10	<10	<10	SLEV
126	May, 2016	F	Sports	G 4	Northwest Fluminense	Itaperuna	<10	80	<10	<10	<10	SLEV
127	May, 2016	F	Sports	G 2	Northwest Fluminense	Itaperuna	<10	20	<10	<10	<10	SLEV
129	May, 2016	F	Sports	G 4	Northwest Fluminense	Itaperuna	<10	80	<10	<10	<10	SLEV
131	May, 2016	F	Sports	G 4	Northwest Fluminense	Itaperuna	<10	20	<10	<10	<10	SLEV
133	May, 2016	F	Reproduction	G 5	Northwest Fluminense	Itaperuna	<10	40	<10	<10	<10	SLEV
134	May, 2016	F	Sports	G 2	Northwest Fluminense	Itaperuna	<10	20	<10	<10	<10	SLEV
136	May, 2016	F	Sports	G 2	Northwest Fluminense	Itaperuna	<10	20	<10	<10	<10	SLEV
155	March, 2017	F	Reproduction	G 4	Northwest Fluminense	Bom Jesus do Itabapoana	2560	10	<10	<10	<10	WNV
156	March, 2017	M	Work	G 5	Northwest Fluminense	Bom Jesus do Itabapoana	320	<10	<10	<10	<10	WNV
163	January, 2016	F	Sports	G 2	Coast	Araruama	<10	80	<10	<10	<10	SLEV
172	January, 2016	F	Reproduction	G 4	Coast	Araruama	<10	160	<10	<10	<10	SLEV
173	January, 2016	F	Reproduction	G 4	Coast	Araruama	40	<10	<10	<10	<10	WNV
179	January, 2016	F	Reproduction	G 3	Coast	Casimiro de Abreu	<10	80	<10	<10	<10	SLEV
182	January, 2016	F	Reproduction	G 3	Coast	Casimiro de Abreu	<10	20	<10	<10	<10	SLEV
183	January, 2016	F	Reproduction	G 3	Coast	Casimiro de Abreu	<10	20	<10	<10	<10	SLEV
186	January, 2016	F	Reproduction	G 4	Coast	Casimiro de Abreu	<10	40	<10	<10	<10	SLEV
187	January, 2016	F	Reproduction	G 4	Coast	Casimiro de Abreu	<10	40	<10	<10	<10	SLEV

189	January, 2016	F	Reproduction	G4	Coast	Casimiro de Abreu	<10	40	<10	<10	<10	SLEV
190	January, 2016	F	Reproduction	G4	Coast	Casimiro de Abreu	10	80	<10	<10	<10	SLEV
198	January, 2016	F	Reproduction	G5	Coast	Casimiro de Abreu	10	80	<10	<10	<10	SLEV
204	January, 2016	M	Sports	G3	Coast	Saquarema	<10	80	<10	<10	<10	SLEV
209	January, 2016	F	Sports	G2	Coast	Saquarema	<10	20	<10	<10	<10	SLEV
214	January, 2016	F	Sports	G3	Coast	Saquarema	<10	40	<10	<10	<10	SLEV
217	January, 2016	F	Reproduction	G4	Coast	Saquarema	40	<10	<10	<10	<10	WNV
220	January, 2016	F	Reproduction	G3	Coast	Saquarema	10	40	<10	<10	<10	SLEV
222	January, 2016	F	Reproduction	G4	Coast	Saquarema	10	40	<10	<10	<10	SLEV
223	January, 2016	F	Reproduction	G4	Coast	Saquarema	10	80	<10	<10	<10	SLEV
224	January, 2016	F	Reproduction	G4	Coast	Saquarema	<10	160	<10	<10	<10	SLEV
228	January, 2016	F	Reproduction	G4	Coast	Saquarema	40	160	<10	<10	<10	SLEV
238	November, 2015	M	Reproduction	G5	Centre Fluminense	Cantagalo	<10	80	<10	<10	<10	SLEV
240	November, 2015	M	Reproduction	G 4	Centre Fluminense	Cantagalo	<10	20	<10	<10	<10	SLEV
245	November, 2015	M	Sports	G 3	Centre Fluminense	Cantagalo	<10	40	<10	<10	<10	SLEV
247	November, 2015	F	Sports	G 2	Centre Fluminense	Cantagalo	<10	40	<10	<10	<10	SLEV
248	November, 2015	M	Sports	G 3	Centre Fluminense	Cantagalo	80	320	<10	<10	<10	SLEV
249	November, 2015	M	Sports	G 1	Centre Fluminense	Cantagalo	<10	40	<10	<10	<10	SLEV
255	January, 2016	M	Sports	G 4	Centre Fluminense	Paraíba do Sul	20	80	<10	<10	<10	SLEV
258	January, 2016	M	Sports	G 4	Centre Fluminense	Paraíba do Sul	<10	20	<10	<10	<10	SLEV
261	January, 2016	M	Sports	G 4	Centre Fluminense	Paraíba do Sul	<10	320	<10	<10	<10	SLEV

266	January, 2016	F	Sports	G 4	Centre Fluminense	Paraíba do Sul	20	160	<10	<10	<10	SLEV
269	January, 2016	F	Reproduction	G 5	Centre Fluminense	Areal	10	40	<10	<10	<10	SLEV
270	January, 2016	F	Reproduction	G 5	Centre Fluminense	Areal	10	40	<10	<10	<10	SLEV
275	January, 2016	M	Recreation	G 5	Centre Fluminense	Areal	<10	160	<10	<10	<10	SLEV
277	January, 2016	F	Recreation	G 5	Centre Fluminense	Areal	<10	80	<10	<10	<10	SLEV
278	January, 2016	M	Recreation	G 5	Centre Fluminense	Areal	20	80	<10	<10	<10	SLEV
285	November, 2015	F	Sports	G 2	Metropolitan	Cachoeiras de Macacu	<10	20	<10	<10	<10	SLEV
287	November, 2015	M	Sports	G 5	Metropolitan	Cachoeiras de Macacu	<10	160	<10	<10	<10	SLEV
311	November, 2015	M	Sports	G 3	Metropolitan	Cachoeiras de Macacu	10	80	<10	<10	<10	SLEV
322	November, 2015	M	Sports	G 2	Metropolitan	Cachoeiras de Macacu	<10	20	<10	<10	<10	SLEV
338	May, 2016	M	Reproduction	G 3	Metropolitan	Duque de Caxias	<10	80	<10	<10	<10	SLEV
345	May, 2016	F	Reproduction	G 5	Metropolitan	Duque de Caxias	<10	20	<10	<10	<10	SLEV
356	August, 2015	M	Sports	G 3	Metropolitan	Teresópolis	<10	20	<10	<10	<10	SLEV
358	August, 2015	M	Sports	G 3	Metropolitan	Teresópolis	<10	20	<10	<10	<10	SLEV
361	August, 2015	M	Sports	G 3	Metropolitan	Teresópolis	10	80	<10	<10	<10	SLEV
364	August, 2015	M	Sports	G 3	Metropolitan	Teresópolis	<10	160	<10	<10	<10	SLEV
372	August, 2015	M	Sports	G 3	Metropolitan	Teresópolis	<10	20	<10	<10	<10	SLEV

WNV- West Nile virus; SLEV- Saint Louis encephalitis virus; ILHV- Ilheus virus; DENV-1- dengue virus serotype 1; ZIKV- Zika virus; F-Female; M-Male; G - Group

Table S2 Horses that were undifferentiated flavivirus in RJ.

Sample ID	Collection date	Sex	Activities	Age group	Mesoregions	Municipalities	PRNT90 titer					Interpretation
							WNV	SLEV	ZIKV	DENV-1	ILHV	

1	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	10	20	<10	<10	<10	Undifferentiated flavivirus
17	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	10	20	<10	<10	<10	Undifferentiated flavivirus
25	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	20	40	<10	<10	<10	Undifferentiated flavivirus
26	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	80	40	<10	<10	<10	Undifferentiated flavivirus
32	January, 2016	F	Reproduction	G 5	North Fluminense	Macaé	10	10	<10	<10	<10	Undifferentiated flavivirus
33	January, 2016	F	Reproduction	G 4	North Fluminense	Macaé	20	40	<10	<10	<10	Undifferentiated flavivirus
60	March, 2016	F	Sports	G 4	North Fluminense	São Fidélis	10	20	<10	<10	<10	Undifferentiated flavivirus
64	March, 2016	F	Reproduction	G 3	North Fluminense	São Fidélis	10	10	<10	<10	<10	Undifferentiated flavivirus
72	April, 2016	M	Reproduction	G 4	North Fluminense	Campos dos Goytacazes	20	20	<10	<10	<10	Undifferentiated flavivirus
85	April, 2016	F	Recreation	G 4	Northwest Fluminense	Bom Jesus do Itabapoana	10	10	<10	<10	<10	Undifferentiated flavivirus
151	April, 2016	F	Reproduction	G 3	Northwest Fluminense	Bom Jesus do Itabapoana	10	10	<10	<10	<10	Undifferentiated flavivirus
154	April, 2016	F	Reproduction	G 4	Northwest Fluminense	Bom Jesus do Itabapoana	20	20	NA	NA	NA	Undifferentiated flavivirus
111	May, 2016	F	Sports	G 4	Northwest Fluminense	Itaperuna	20	40	<10	<10	<10	Undifferentiated flavivirus
113	May, 2016	F	Sports	G 5	Northwest Fluminense	Itaperuna	10	10	<10	<10	<10	Undifferentiated flavivirus
119	May, 2016	F	Sports	G 2	Northwest Fluminense	Itaperuna	20	40	<10	<10	<10	Undifferentiated flavivirus
122	May, 2016	M	Sports	G 4	Northwest Fluminense	Itaperuna	10	10	<10	<10	<10	Undifferentiated flavivirus
128	May, 2016	F	Sports	G 4	Northwest Fluminense	Itaperuna	10	10	<10	<10	<10	Undifferentiated flavivirus
194	January, 2016	F	Reproduction	G5	Coast	Casimiro de Abreu	10	10	<10	<10	<10	Undifferentiated flavivirus
196	January, 2016	F	Reproduction	G5	Coast	Casimiro de Abreu	10	10	<10	<10	<10	Undifferentiated flavivirus
213	January, 2016	F	Sports	G3	Coast	Saquarema	10	20	<10	<10	<10	Undifferentiated flavivirus
215	January, 2016	F	Sports	G3	Coast	Saquarema	20	10	<10	<10	<10	Undifferentiated flavivirus

219	January, 2016	F	Reproduction	G4	Coast	Saquarema	80	40	<10	<10	<10	Undifferentiated flavivirus
262	January, 2016	M	Sports	G 4	Centre Fluminense	Paraíba do Sul	10	10	<10	<10	<10	Undifferentiated flavivirus
279	January, 2016	F	Recreation	G 5	Centre Fluminense	Areal	10	10	<10	<10	<10	Undifferentiated flavivirus
310	November, 2015	F	Sports	G 3	Metropolitan	Cachoeiras de Macacu	40	40	<10	<10	<10	Undifferentiated flavivirus
328	November, 2015	M	Sports	G 2	Metropolitan	Cachoeiras de Macacu	20	40	<10	<10	<10	Undifferentiated flavivirus
329	November, 2015	F	Reproduction	G 4	Metropolitan	Cachoeiras de Macacu	20	40	<10	<10	<10	Undifferentiated flavivirus
337	May, 2016	F	Reproduction	G 5	Metropolitan	Duque de Caxias	10	10	<10	<10	<10	Undifferentiated flavivirus
353	August, 2015	M	Sports	G 3	Metropolitan	Teresópolis	10	10	<10	<10	<10	Undifferentiated flavivirus
373	August, 2015	M	Sports	G 3	Metropolitan	Teresópolis	20	20	<10	<10	<10	Undifferentiated flavivirus
429	May, 2016	M	Sports	G 5	South Fluminense	Resende	80	40	<10	<10	<10	Undifferentiated flavivirus
435	May, 2016	F	Reproduction	G 5	South Fluminense	Resende	40	40	<10	<10	<10	Undifferentiated flavivirus

WNV- West Nile virus; SLEV- Saint Louis encephalitis virus; ILHV- Ilheus virus; DENV-1- dengue virus serotype 1; ZIKV- Zika virus; F-Female; M-Male; G - Group