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Characterization of Nipah Virus from Outbreaks in Bangladesh, 2008–2010

Technical Appendix

The following pages show estimates of evolutionary divergence between Nipah virus (NiV) open reading frame (ORF) nucleotide and amino acid sequences. All positions containing gaps and missing data were eliminated. All evolutionary analyses were conducted by using MEGA5 (*1*). MY, Malaysia; KH, Cambodia; BD, Bangladesh; IN, India; HU, human; PI, pig; BA, bat.

Reference

<jrn>1. Tamura K, Peterson D, Peterson N, Stecher G, Nei M, Kumar S. MEGA5: Molecular Evolutionary Genetics Analysis using maximum likelihood, evolutionary distance, and maximum parsimony methods. Mol Biol Evol. 2011. Submitted. <u>Medline</u> doi:10.1093/molbev/msr121</jrn>

Nipah sequence ID	Accession #	Genotype																			
NiV/MY/HU/1999/CDC	AF212302	M																			
NiV/MY/PI/1999/1413	AJ564622	М	0.0																		
NiV/MY/PI/1999/2794	AJ564621	М	0.0	0.0																	
NiV/MY/HU/1999/0128	AJ564623	М	0.0	0.0	0.0																
NiV/MY/HU/1999/UM1	AY029767	М	0.0	0.0	0.0	0.0															
NiV/MY/HU/1999/UM2	AY029768	М	0.0	0.0	0.0	0.0	0.0														
NiV/MY/BA/2000/TI	AF376747	М	1.0	1.0	1.0	1.0	1.0	1.0													
NiV/MY/PI/1999/0626	AJ627196	М	5.0	5.0	5.0	5.0	5.0	5.0	6.0												
NiV/MY/BA/2010/MY	FN869553	М	11.0	11.0	11.0	11.0	11.0	11.0	12.0	14.0											
NiV/KH/BA/2004/KHM	AY858110	М	32.0	32.0	32.0	32.0	32.0	32.0	33.0	35.0	27.0										
NiV/BD/HU/2004/RA1	AY988601	В	91.0	91.0	91.0	91.0	91.0	91.0	92.0	94.0	90.0	95.0									
NiV/BD/HU/2004/FA	JN808858	В	95.0	95.0	95.0	95.0	95.0	95.0	96.0	98.0	94.0	99.0	7.0								
NiV/BD/HU/2004/RA2	JN808861	В	88.0	88.0	88.0	88.0	88.0	88.0	89.0	91.0	85.0	90.0	12.0	15.0							
NiV/BD/HU/2004/RAJ	JN808862	В	94.0	94.0	94.0	94.0	94.0	94.0	95.0	97.0	93.0	98.0	6.0	5.0	14.0						
NiV/BD/HU/2008/MA	JN808857	В	90.0	90.0	90.0	90.0	90.0	90.0	91.0	93.0	89.0	94.0	10.0	13.0	14.0	12.0					
NiV/BD/HU/2008/RA	JN808863	В	90.0	90.0	90.0	90.0	90.0	90.0	91.0	93.0	89.0	94.0	10.0	13.0	14.0	12.0	0.0				
NiV/BD/HU/2010/FA1	JN808864	В	91.0	91.0	91.0	91.0	91.0	91.0	92.0	94.0	90.0	95.0	5.0	8.0	13.0	7.0	11.0	11.0			
NiV/BD/HU/2010/GO	JN808860	В	97.0	97.0	97.0	97.0	97.0	97.0	98.0	98.0	96.0	101.0	13.0	16.0	17.0	15.0	9.0	9.0	14.0		
NiV/BD/HU/2010/FA2	JN808859	В	91.0	91.0	91.0	91.0	91.0	91.0	92.0	94.0	90.0	97.0	9.0	12.0	13.0	11.0	7.0	7.0	10.0	10.0	
NiV/IN/HU/2007/FG	FJ513078	В	95.0	95.0	95.0	95.0	95.0	95.0	96.0	98.0	94.0	99.0	9.0	12.0	15.0	11.0	7.0	7.0	10.0	6.0	8.0

Nipah sequence ID	Accession # Gen	otype																			
NiV/MY/HU/1999/CDC	AF212302	M																			
NiV/MY/PI/1999/1413	AJ564622	M	0.00%																		
NiV/MY/PI/1999/2794	AJ564621	М	0.00%	0.00%																	
NiV/MY/HU/1999/0128	AJ564623	M	0.00%	0.00%	0.00%																
NiV/MY/HU/1999/UM1	AY029767	М	0.00%	0.00%	0.00%	0.00%															
NiV/MY/HU/1999/UM2	AY029768	M	0.00%	0.00%	0.00%	0.00%	0.00%														
NiV/MY/BA/2000/TI	AF376747	М	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%													
NiV/MY/PI/1999/0626	AJ627196	M	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.38%												
NiV/MY/BA/2010/MY	FN869553	М	0.69%	0.69%	0.69%	0.69%	0.69%	0.69%	0.75%	0.88%											
NiV/KH/BA/2004/KHM	AY858110	М	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.06%	2.19%	1.69%										
NiV/BD/HU/2004/RA1	AY988601	В	5.69%	5.69%	5.69%	5.69%	5.69%	5.69%	5.75%	5.88%	5.63%	5.94%									
NiV/BD/HU/2004/FA	JN808858	В	5.94%	5.94%	5.94%	5.94%	5.94%	5.94%	6.00%	6.13%	5.88%	6.19%	0.44%								
NiV/BD/HU/2004/RA2	JN808861	В	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.57%	5.69%	5.32%	5.63%	0.75%	0.94%							
NiV/BD/HU/2004/RAJ	JN808862	В	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%	5.94%	6.07%	5.82%	6.13%	0.38%	0.31%	0.88%						
NiV/BD/HU/2008/MA	JN808857	В	5.63%	5.63%	5.63%	5.63%	5.63%	5.63%	5.69%	5.82%	5.57%	5.88%	0.63%	0.81%	0.88%	0.75%					
NiV/BD/HU/2008/RA	JN808863	В	5.63%	5.63%	5.63%	5.63%	5.63%	5.63%	5.69%	5.82%	5.57%	5.88%	0.63%	0.81%	0.88%	0.75%	0.00%				
NiV/BD/HU/2010/FA1	JN808864	В	5.69%	5.69%	5.69%	5.69%	5.69%	5.69%	5.75%	5.88%	5.63%	5.94%	0.31%	0.50%	0.81%	0.44%	0.69%	0.69%			
NiV/BD/HU/2010/GO	JN808860	В	6.07%	6.07%	6.07%	6.07%	6.07%	6.07%	6.13%	6.13%	6.00%	6.32%	0.81%	1.00%	1.06%	0.94%	0.56%	0.56%	0.88%		
NiV/BD/HU/2010/FA2	JN808859	В	5.69%	5.69%	5.69%	5.69%	5.69%	5.69%	5.75%	5.88%	5.63%	6.07%	0.56%	0.75%	0.81%	0.69%	0.44%	0.44%	0.63%	0.63%	
NiV/IN/HU/2007/FG	FJ513078	В	5.94%	5.94%	5.94%	5.94%	5.94%	5.94%	6.00%	6.13%	5.88%	6.19%	0.56%	0.75%	0.94%	0.69%	0.44%	0.44%	0.63%	0.38%	0.50%

Technical Appendix Figure 1A. Estimates of evolutionary divergence between NiV N ORF nucleotide sequences. The number of base differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. The analysis involved 20 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 1,599 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype																			
NiV/MY/HU/1999/CDC	AF212302	М																			
NiV/MY/PI/1999/1413	AJ564622	М	0.0																		
NiV/MY/PI/1999/2794	AJ564621	М	0.0	0.0																	
NiV/MY/HU/1999/0128	AJ564623	М	2.0	2.0	2.0																
NiV/MY/HU/1999/UM1	AY029767	М	0.0	0.0	0.0	2.0															
NiV/MY/HU/1999/UM2	AY029768	М	0.0	0.0	0.0	2.0	0.0														
NiV/MY/BA/2000/TI	AF376747	М	0.0	0.0	0.0	2.0	0.0	0.0													
NiV/MY/PI/1999/0626	AJ627196	М	1.0	1.0	1.0	3.0	1.0	1.0	1.0												
NiV/MY/BA/2010/MY	FN869553	М	3.0	3.0	3.0	5.0	3.0	3.0	3.0	4.0											
NiV/KH/BA/2004/KHM	AY858110	М	7.0	7.0	7.0	9.0	7.0	7.0	7.0	8.0	4.0										
NiV/BD/HU/2004/RA1	AY988601	В	9.0	9.0	9.0	11.0	9.0	9.0	9.0	10.0	6.0	8.0									
NiV/BD/HU/2004/FA	JN808858	В	10.0	10.0	10.0	12.0	10.0	10.0	10.0	11.0	7.0	9.0	3.0								
NiV/BD/HU/2004/RA2	JN808861	В	8.0	8.0	8.0	10.0	8.0	8.0	8.0	9.0	5.0	7.0	1.0	2.0							
NiV/BD/HU/2004/RAJ	JN808862	В	10.0	10.0	10.0	12.0	10.0	10.0	10.0	11.0	7.0	9.0	3.0	2.0	2.0						
NiV/BD/HU/2008/MA	JN808857	В	8.0	8.0	8.0	10.0	8.0	8.0	8.0	9.0	5.0	7.0	1.0	2.0	0.0	2.0					
NiV/BD/HU/2008/RA	JN808863	В	8.0	8.0	8.0	10.0	8.0	8.0	8.0	9.0	5.0	7.0	1.0	2.0	0.0	2.0	0.0				
NiV/BD/HU/2010/FA1	JN808864	В	9.0	9.0	9.0	11.0	9.0	9.0	9.0	10.0	6.0	8.0	2.0	3.0	1.0	3.0	1.0	1.0			
NiV/BD/HU/2010/GO	JN808860	В	9.0	9.0	9.0	11.0	9.0	9.0	9.0	10.0	6.0	8.0	2.0	3.0	1.0	3.0	1.0	1.0	2.0		
NiV/BD/HU/2010/FA2	JN808859	В	8.0	8.0	8.0	10.0	8.0	8.0	8.0	9.0	5.0	7.0	1.0	2.0	0.0	2.0	0.0	0.0	1.0	1.0	
NiV/IN/HU/2007/FG	FJ513078	В	9.0	9.0	9.0	11.0	9.0	9.0	9.0	10.0	6.0	8.0	2.0	3.0	1.0	3.0	1.0	1.0	2.0	2.0	1.0

Nipah sequence ID	Accession #	Genotype																		
NiV/MY/HU/1999/CDC	AF212302	M																		
NiV/MY/PI/1999/1413	AJ564622	М	0.00%																	
NiV/MY/PI/1999/2794	AJ564621	М	0.00% 0.00%																	
NiV/MY/HU/1999/0128	AJ564623	М	0.38% 0.38%	0.38%																
NiV/MY/HU/1999/UM1	AY029767	М	0.00% 0.00%	0.00%	0.38%															
NiV/MY/HU/1999/UM2	AY029768	М	0.00% 0.00%	0.00%	0.38%	0.00%														
NiV/MY/BA/2000/TI	AF376747	М	0.00% 0.00%	0.00%	0.38%	0.00%	0.00%													
NiV/MY/PI/1999/0626	AJ627196	М	0.19% 0.19%	0.19%	0.56%	0.19%	0.19%	0.19%												
NiV/MY/BA/2010/MY	FN869553	М	0.56% 0.56%	0.56%	0.94%	0.56%	0.56%	0.56%	0.75%											
NiV/KH/BA/2004/KHM	AY858110	М	1.32% 1.32%	1.32%	1.69%	1.32%	1.32%	1.32%	1.50%	0.75%										
NiV/BD/HU/2004/RA1	AY988601	В	1.69% 1.69%	1.69%	2.07%	1.69%	1.69%	1.69%	1.88%	1.13%	1.50%									
NiV/BD/HU/2004/FA	JN808858	В	1.88% 1.88%	1.88%	2.26%	1.88%	1.88%	1.88%	2.07%	1.32%	1.69%	0.56%								
NiV/BD/HU/2004/RA2	JN808861	В	1.50% 1.50%	1.50%	1.88%	1.50%	1.50%	1.50%	1.69%	0.94%	1.32%	0.19%	0.38%							
NiV/BD/HU/2004/RAJ	JN808862	В	1.88% 1.88%	1.88%	2.26%	1.88%	1.88%	1.88%	2.07%	1.32%	1.69%	0.56%	0.38%	0.38%						
NiV/BD/HU/2008/MA	JN808857	В	1.50% 1.50%	1.50%	1.88%	1.50%	1.50%	1.50%	1.69%	0.94%	1.32%	0.19%	0.38%	0.00%	0.38%					
NiV/BD/HU/2008/RA	JN808863	В	1.50% 1.50%	1.50%	1.88%	1.50%	1.50%	1.50%	1.69%	0.94%	1.32%	0.19%	0.38%	0.00%	0.38%	0.00%				
NiV/BD/HU/2010/FA1	JN808864	В	1.69% 1.69%	1.69%	2.07%	1.69%	1.69%	1.69%	1.88%	1.13%	1.50%	0.38%	0.56%	0.19%	0.56%	0.19%	0.19%			
NiV/BD/HU/2010/GO	JN808860	В	1.69% 1.69%	1.69%	2.07%	1.69%	1.69%	1.69%	1.88%	1.13%	1.50%	0.38%	0.56%	0.19%	0.56%	0.19%	0.19%	0.38%		
NiV/BD/HU/2010/FA2	JN808859	В	1.50% 1.50%	1.50%	1.88%	1.50%	1.50%	1.50%	1.69%	0.94%	1.32%	0.19%	0.38%	0.00%	0.38%	0.00%	0.00%	0.19%	0.19%	
NiV/IN/HU/2007/FG	FJ513078	В	1.69% 1.69%	1.69%	2.07%	1.69%	1.69%	1.69%	1.88%	1.13%	1.50%	0.38%	0.56%	0.19%	0.56%	0.19%	0.19%	0.38%	0.38%	0.19%

Technical Appendix Figure 1B. Estimates of evolutionary divergence between NiV N ORF amino acid sequences. The number of amino acid differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 20 aa sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 532 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype																			
NiV/MY/HU/1999/CDC	AF212302	М																			
NiV/MY/PI/1999/1413	AJ564622	М	0.0																		
NiV/MY/PI/1999/2794	AJ564621	М	0.0	0.0																	
NiV/MY/PI/1999/0128	AJ564623	М	0.0	0.0	0.0																
NiV/MY/HU/1999/UM1	AY029767	М	0.0	0.0	0.0	0.0															
NiV/MY/HU/1999/UM2	AY029768	М	0.0	0.0	0.0	0.0	0.0														
NiV/MY/BA/2000/TI	AF376747	М	0.0	0.0	0.0	0.0	0.0	0.0													
NiV/MY/PI/1999/0626	AJ627196	М	3.0	3.0	3.0	3.0	3.0	3.0	3.0												
NiV/MY/BA/2010/MY	FN869553	М	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0											
NiV/KH/BA/2004/KHM	AY858110	М	14.0	14.0	14.0	14.0	14.0	14.0	14.0	15.0	11.0										
NiV/BD/HU/2004/RA1	AY988601	В	36.0	36.0	36.0	36.0	36.0	36.0	36.0	37.0	35.0	38.0									
NiV/BD/HU/2004/RA2	JN808858	В	37.0	37.0	37.0	37.0	37.0	37.0	37.0	38.0	34.0	37.0	6.0								
NiV/BD/HU/2004/RAJ	JN808861	В	36.0	36.0	36.0	36.0	36.0	36.0	36.0	37.0	35.0	38.0	1.0	5.0							
NiV/BD/HU/2004/FA	JN808862	В	37.0	37.0	37.0	37.0	37.0	37.0	37.0	38.0	36.0	39.0	2.0	6.0	1.0						
NiV/BD/HU/2008/MA	JN808857	В	36.0	36.0	36.0	36.0	36.0	36.0	36.0	37.0	35.0	38.0	5.0	7.0	4.0	5.0					
NiV/BD/HU/2008/RA	JN808863	В	36.0	36.0	36.0	36.0	36.0	36.0	36.0	37.0	35.0	38.0	5.0	7.0	4.0	5.0	0.0				
NiV/BD/HU/2010/FA1	JN808864	В	35.0	35.0	35.0	35.0	35.0	35.0	35.0	36.0	34.0	37.0	2.0	6.0	1.0	2.0	5.0	5.0			
NiV/BD/HU/2010/GO	JN808860	В	37.0	37.0	37.0	37.0	37.0	37.0	37.0	38.0	36.0	39.0	4.0	6.0	3.0	4.0	1.0	1.0	4.0		
NiV/BD/HU/2010/FA2	JN808859	В	35.0	35.0	35.0	35.0	35.0	35.0	35.0	36.0	34.0	39.0	4.0	6.0	3.0	4.0	3.0	3.0	4.0	2.0	
NiV/IN/HU/2007/FG	FJ513078	В	39.0	39.0	39.0	39.0	39.0	39.0	39.0	40.0	38.0	41.0	4.0	8.0	3.0	4.0	3.0	3.0	4.0	2.0	4.0

Nipah sequence ID	Accession #	Genotype																			
NiV/MY/HU/1999/CDC	AF212302	M																			
NiV/MY/PI/1999/1413	AJ564622	М	0.00%																		
NiV/MY/PI/1999/2794	AJ564621	М	0.00%	0.00%																	
NiV/MY/PI/1999/0128	AJ564623	M	0.00%	0.00%	0.00%																
NiV/MY/HU/1999/UM1	AY029767	Μ	0.00%	0.00%	0.00%	0.00%															
NiV/MY/HU/1999/UM2	AY029768	Μ	0.00%	0.00%	0.00%	0.00%	0.00%														
NiV/MY/BA/2000/TI	AF376747	М	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%													
NiV/MY/PI/1999/0626	AJ627196	Μ	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%												
NiV/MY/BA/2010/MY	FN869553	M	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.55%											
NiV/KH/BA/2004/KHM	AY858110	M	1.92%	1.92%	1.92%	1.92%	1.92%	1.92%	1.92%	2.06%	1.51%										
NiV/BD/HU/2004/RA1	AY988601	В	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	5.08%	4.80%	5.21%									
NiV/BD/HU/2004/RA2	JN808858	В	5.08%	5.08%	5.08%	5.08%	5.08%	5.08%	5.08%	5.21%	4.66%	5.08%	0.82%								
NiV/BD/HU/2004/RAJ	JN808861	В	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	5.08%	4.80%	5.21%	0.14%	0.69%							
NiV/BD/HU/2004/FA	JN808862	В	5.08%	5.08%	5.08%	5.08%	5.08%	5.08%	5.08%	5.21%	4.94%	5.35%	0.27%	0.82%	0.14%						
NiV/BD/HU/2008/MA	JN808857	В	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	5.08%	4.80%	5.21%	0.69%	0.96%	0.55%	0.69%					
NiV/BD/HU/2008/RA	JN808863	В	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	4.94%	5.08%	4.80%	5.21%	0.69%	0.96%	0.55%	0.69%	0.00%				
NiV/BD/HU/2010/FA1	JN808864	В	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.94%	4.66%	5.08%	0.27%	0.82%	0.14%	0.27%	0.69%	0.69%			
NiV/BD/HU/2010/GO	JN808860	В	5.08%	5.08%	5.08%	5.08%	5.08%	5.08%	5.08%	5.21%	4.94%	5.35%	0.55%	0.82%	0.41%	0.55%	0.14%	0.14%	0.55%		
NiV/BD/HU/2010/FA2	JN808859	В	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.94%	4.66%	5.35%	0.55%	0.82%	0.41%	0.55%	0.41%	0.41%	0.55%	0.27%	
NiV/IN/HU/2007/FG	FJ513078	В	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.49%	5.21%	5.62%	0.55%	1.10%	0.41%	0.55%	0.41%	0.41%	0.55%	0.27%	0.55%

Technical Appendix Figure 1C. Estimates of evolutionary divergence between NiV N ORF nucleotide sequences within a 729-nt window. The number of base differences (top matrix) and percentage of differences (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 20 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 729 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype																			
NiV/MY/HU/1999/CDC	AF212302	M																			
NiV/MY/PI/1999/1413	AJ564622	М	0.0																		
NiV/MY/PI/1999/2794	AJ564621	М	0.0	0.0																	
NiV/MY/HU/1999/0128	AJ564623	М	0.0	0.0	0.0																
NiV/MY/HU/1999/UM1	AY029767	М	0.0	0.0	0.0	0.0															
NiV/MY/HU/1999/UM2	AY029768	М	0.0	0.0	0.0	0.0	0.0														
NiV/MY/BA/2000/TI	AF376747	М	0.0	0.0	0.0	0.0	0.0	0.0													
NiV/MY/PI/1999/0626	AJ627196	М	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
NiV/MY/BA/2010/MY	FN869553	М	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0											
NiV/KH/BA/2004/KHM	AY858110	М	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0										
NiV/BD/HU/2004/RA1	AY988601	В	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	22.0									
NiV/BD/HU/2004/FA	JN808858	В	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	26.0	25.0	3.0								
NiV/BD/HU/2004/RA2	JN808861	В	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	21.0	3.0	6.0							
NiV/BD/HU/2004/RAJ	JN808862	В	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	27.0	26.0	4.0	3.0	7.0						
NiV/BD/HU/2008/MA	JN808857	В	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	23.0	3.0	6.0	4.0	7.0					
NiV/BD/HU/2008/RA	JN808863	В	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	23.0	3.0	6.0	4.0	7.0	0.0				
NiV/BD/HU/2010/FA1	JN808864	В	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	23.0	1.0	4.0	4.0	5.0	4.0	4.0			
NiV/BD/HU/2010/GO	JN808860	В	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	23.0	3.0	6.0	4.0	7.0	2.0	2.0	4.0		
NiV/BD/HU/2010/FA2	JN808859	В	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	23.0	3.0	6.0	4.0	7.0	2.0	2.0	4.0	2.0	
NiV/IN/HU/2007/FG	FJ513078	В	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	22.0	2.0	5.0	3.0	6.0	1.0	1.0	3.0	1.0	1.0
		. .																			
Nipah sequence ID	Accession #	Genotype																			
NIV/MY/HU/1999/CDC	AF212302	M																			
NIV/MY/PI/1999/1413	AJ564622	M	0.00%	/																	
NiV/MY/PI/1999/2794	AJ564621	M	0.00%	0.00%																	
NiV/MY/HU/1999/0128	AJ564623	M	0.00%	0.00%	0.00%																
NIV/MY/HU/1999/UM1	AY029767	M	0.00%	0.00%	0.00%	0.00%	/														
NiV/MY/HU/1999/UM2	AY029768	M	0.00%	0.00%	0.00%	0.00%	0.00%														
NiV/MY/BA/2000/TI	AF376747	M	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%													
NiV/MY/PI/1999/0626	AJ627196	M	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%												
NIV/MY/BA/2010/MY	FN869553	M	1.96%	1.96%	1.96%	1.96%	1.96%	1.96%	1.96%	1.96%											
NiV/KH/BA/2004/KHM	AY858110	M	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%	1.40%										
NiV/BD/HU/2004/RA1	AY988601	В	6.72%	6.72%	6.72%	6.72%	6.72%	6.72%	6.72%	6.72%	6.44%	6.16%									
NiV/BD/HU/2004/FA	JN808858	В	7.56%	7.56%	7.56%	7.56%	7.56%	7.56%	7.56%	7.56%	7.28%	7.00%	0.84%								
NiV/BD/HU/2004/RA2	JN808861	В	6.44%	6.44%	6.44%	6.44%	6.44%	6.44%	6.44%	6.44%	6.16%	5.88%	0.84%	1.68%							
NiV/BD/HU/2004/RAJ	JN808862	В	7.84%	7.84%	7.84%	7.84%	7.84%	7.84%	7.84%	7.84%	7.56%	7.28%	1.12%	0.84%	1.96%						
NIV/BD/HU/2008/MA	JN808857	В	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	6.72%	6.44%	0.84%	1.68%	1.12%	1.96%					
NIV/BD/HU/2008/RA	111000000	-	7 000/	7 000/	7 00%	7 00%	7.00%	7.00%	7.00%	7.00%	6.72%	6.44%	0.84%	1.68%	1.12%	1.96%	0.00%				
	JN808863	В	7.00%	7.00%	7.00%	1.00/0															
NiV/BD/HU/2010/FA1	JN808863 JN808864	B	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	6.72%	6.44%	0.28%	1.12%	1.12%	1.40%	1.12%	1.12%			
NiV/BD/HU/2010/FA1 NiV/BD/HU/2010/GO	JN808863 JN808864 JN808860	B B B	7.00% 7.00% 7.00%	7.00% 7.00% 7.00%	7.00% 7.00%	7.00% 7.00%	7.00% 7.00%	7.00% 7.00%	7.00% 7.00%	7.00% 7.00%	6.72% 6.72%	6.44% 6.44%	0.28% 0.84%	1.12% 1.68%	1.12% 1.12%	1.40% 1.96%	1.12% 0.56%	1.12% 0.56%	1.12%		
NiV/BD/HU/2010/FA1 NiV/BD/HU/2010/GO NiV/BD/HU/2010/FA2	JN808863 JN808864 JN808860 JN808859	B B B	7.00% 7.00% 7.00%	6.72% 6.72% 6.72%	6.44% 6.44% 6.44%	0.28% 0.84% 0.84%	1.12% 1.68% 1.68%	1.12% 1.12% 1.12%	1.40% 1.96% 1.96%	1.12% 0.56% 0.56%	1.12% 0.56% 0.56%	1.12% 1.12%	0.56%								

Technical Appendix Figure 1D. Estimates of evolutionary divergence between NiV N ORF nucleotide sequences within a 357-nt window. The number of base differences (top matrix) and percentage of differences (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 20 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 357 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	М													
NiV/MY/PI/1999/1413	AJ564622	М	0.0												
NiV/MY/PI/1999/2794	AJ564621	М	0.0	0.0											
NiV/MY/HU/1999/0128	AJ564623	М	0.0	0.0	0.0										
NiV/MY/HU/1999/UM1	AY029767	М	0.0	0.0	0.0	0.0									
NiV/MY/HU/1999/UM2	AY029768	М	0.0	0.0	0.0	0.0	0.0								
NiV/MY/BA/2000/TI	AF376747	М	1.0	1.0	1.0	1.0	1.0	1.0							
NiV/MY/PI/1999/0626	AJ627196	М	5.0	5.0	5.0	5.0	5.0	5.0	6.0						
NiV/MY/BA/2010/MY	FN869553	М	46.0	46.0	46.0	46.0	46.0	46.0	47.0	47.0					
NiV/BD/HU/2004/RA1	AY988601	В	171.0	171.0	171.0	171.0	171.0	171.0	172.0	172.0	186.0				
NiV/BD/HU/2008/MA	JN808857	В	179.0	179.0	179.0	179.0	179.0	179.0	180.0	180.0	194.0	14.0			
NiV/BD/HU/2008/RA	JN808863	В	179.0	179.0	179.0	179.0	179.0	179.0	180.0	180.0	194.0	14.0	0.0		
NiV/BD/HU/2010/FA1	JN808864	В	180.0	180.0	180.0	180.0	180.0	180.0	181.0	181.0	195.0	9.0	21.0	21.0	
NiV/IN/HU/2007/FG	FJ513078	В	177.0	177.0	177.0	177.0	177.0	177.0	178.0	178.0	193.0	11.0	11.0	11.0	20.0
Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	M													
NiV/MY/PI/1999/1413	AJ564622	М	0.00%												
NiV/MY/PI/1999/2794	A.1564621														
NiV/MV/HLI/1000/0128		M	0.00%	0.00%											
1110/1333/0120	AJ564623	M	0.00% 0.00%	0.00% 0.00%	0.00%										
NiV/MY/HU/1999/UM1	AJ564623 AY029767	M M M	0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%									
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2	AJ564623 AY029767 AY029768	M M M M	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%								
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI	AJ564623 AY029767 AY029768 AF376747	M M M M	0.00% 0.00% 0.00% 0.00% 0.05%	0.00% 0.00% 0.00% 0.00% 0.05%	0.00% 0.00% 0.00% 0.05%	0.00% 0.00% 0.05%	0.00% 0.05%	0.05%							
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626	AJ564623 AY029767 AY029768 AF376747 AJ627196	M M M M M	0.00% 0.00% 0.00% 0.05% 0.23%	0.00% 0.00% 0.00% 0.05% 0.23%	0.00% 0.00% 0.05% 0.23%	0.00% 0.00% 0.05% 0.23%	0.00% 0.05% 0.23%	0.05% 0.23%	0.28%						
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY	AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553	M M M M M M	0.00% 0.00% 0.00% 0.05% 0.23% 2.16%	0.00% 0.00% 0.00% 0.05% 0.23% 2.16%	0.00% 0.00% 0.05% 0.23% 2.16%	0.00% 0.00% 0.05% 0.23% 2.16%	0.00% 0.05% 0.23% 2.16%	0.05% 0.23% 2.16%	0.28% 2.21%	2.21%					
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1	AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601	M M M M M B	0.00% 0.00% 0.00% 0.05% 0.23% 2.16% 8.03%	0.00% 0.00% 0.00% 0.05% 0.23% 2.16% 8.03%	0.00% 0.00% 0.05% 0.23% 2.16% 8.03%	0.00% 0.00% 0.05% 0.23% 2.16% 8.03%	0.00% 0.05% 0.23% 2.16% 8.03%	0.05% 0.23% 2.16% 8.03%	0.28% 2.21% 8.08%	2.21% 8.08%	8.73%				
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA	AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857	M M M M B B	0.00% 0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40%	0.00% 0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40%	0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40%	0.00% 0.00% 0.23% 2.16% 8.03% 8.40%	0.00% 0.05% 0.23% 2.16% 8.03% 8.40%	0.05% 0.23% 2.16% 8.03% 8.40%	0.28% 2.21% 8.08% 8.45%	2.21% 8.08% 8.45%	8.73% 9.11%	0.66%			
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA	AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863	M M M M B B B B	0.00% 0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40%	0.00% 0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40%	0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40%	0.00% 0.00% 0.23% 2.16% 8.03% 8.40% 8.40%	0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40%	0.05% 0.23% 2.16% 8.03% 8.40% 8.40%	0.28% 2.21% 8.08% 8.45% 8.45%	2.21% 8.08% 8.45% 8.45%	8.73% 9.11% 9.11%	0.66% 0.66%	0.00%		
NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA NiV/BD/HU/2010/FA1	AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863 JN808864	M M M M B B B B B B B	0.00% 0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40% 8.40% 8.45%	0.00% 0.00% 0.00% 0.23% 2.16% 8.03% 8.40% 8.40% 8.40% 8.45%	0.00% 0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40% 8.40% 8.45%	0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40% 8.45%	0.00% 0.05% 0.23% 2.16% 8.03% 8.40% 8.40% 8.40% 8.45%	0.05% 0.23% 2.16% 8.03% 8.40% 8.40% 8.40% 8.45%	0.28% 2.21% 8.08% 8.45% 8.45% 8.50%	2.21% 8.08% 8.45% 8.45% 8.50%	8.73% 9.11% 9.11% 9.15%	0.66% 0.66% 0.42%	0.00% 0.99%	0.99%	

Technical Appendix Figure 2A. Estimates of evolutionary divergence between NiV P ORF nucleotide sequences. The number of base differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 2,130 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	М													
NiV/MY/PI/1999/1413	AJ564622	М	0.0												
NiV/MY/PI/1999/2794	AJ564621	Μ	0.0	0.0											
NiV/MY/HU/1999/0128	AJ564623	М	0.0	0.0	0.0										
NiV/MY/HU/1999/UM1	AY029767	М	0.0	0.0	0.0	0.0									
NiV/MY/HU/1999/UM2	AY029768	М	0.0	0.0	0.0	0.0	0.0								
NiV/MY/BA/2000/TI	AF376747	М	1.0	1.0	1.0	1.0	1.0	1.0							
NiV/MY/PI/1999/0626	AJ627196	Μ	3.0	3.0	3.0	3.0	3.0	3.0	4.0						
NiV/MY/BA/2010/MY	FN869553	М	25.0	25.0	25.0	25.0	25.0	25.0	26.0	26.0					
NiV/BD/HU/2004/RA1	AY988601	В	57.0	57.0	57.0	57.0	57.0	57.0	58.0	58.0	68.0				
NiV/BD/HU/2008/MA	JN808857	В	59.0	59.0	59.0	59.0	59.0	59.0	60.0	60.0	70.0	5.0			
NiV/BD/HU/2008/RA	JN808863	В	59.0	59.0	59.0	59.0	59.0	59.0	60.0	60.0	70.0	5.0	0.0		
NiV/BD/HU/2010/FA1	JN808864	В	59.0	59.0	59.0	59.0	59.0	59.0	60.0	60.0	70.0	2.0	7.0	7.0	
NiV/IN/HU/2007/FG	FJ513078	В	59.0	59.0	59.0	59.0	59.0	59.0	60.0	60.0	70.0	4.0	5.0	5.0	6.0
Nipah sequence ID	Accession #	Genotype													
Nipah sequence ID NiV/MY/HU/1999/CDC	Accession # AF212302	Genotype M													
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413	Accession # AF212302 AJ564622	Genotype M M	0.00%												
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794	Accession # AF212302 AJ564622 AJ564621	Genotype M M M	0.00% 0.00%	0.00%											
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128	Accession # AF212302 AJ564622 AJ564621 AJ564623	Genotype M M M M	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%										
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767	Genotype M M M M M	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%									
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768	Genotype M M M M M M	0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%								
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747	Genotype M M M M M M M	0.00% 0.00% 0.00% 0.00% 0.00% 0.14%	0.00% 0.00% 0.00% 0.00% 0.14%	0.00% 0.00% 0.00% 0.14%	0.00% 0.00% 0.14%	0.00% 0.14%	0.14%							
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196	Genotype M M M M M M M M	0.00% 0.00% 0.00% 0.00% 0.00% 0.14% 0.42%	0.00% 0.00% 0.00% 0.00% 0.14% 0.42%	0.00% 0.00% 0.14% 0.42%	0.00% 0.00% 0.14% 0.42%	0.00% 0.14% 0.42%	0.14% 0.42%	0.56%						
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553	Genotype M M M M M M M M M M	0.00% 0.00% 0.00% 0.00% 0.14% 0.42% 3.53%	0.00% 0.00% 0.00% 0.14% 0.42% 3.53%	0.00% 0.00% 0.14% 0.42% 3.53%	0.00% 0.00% 0.14% 0.42% 3.53%	0.00% 0.14% 0.42% 3.53%	0.14% 0.42% 3.53%	0.56% 3.67%	3.67%					
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601	Genotype M M M M M M M M M B	0.00% 0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04%	0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04%	0.00% 0.14% 0.42% 3.53% 8.04%	0.14% 0.42% 3.53% 8.04%	0.56% 3.67% 8.18%	3.67% 8.18%	9.59%				
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857	Genotype M M M M M M M M B B B	0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32%	0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32%	0.00% 0.14% 0.42% 3.53% 8.04% 8.32%	0.14% 0.42% 3.53% 8.04% 8.32%	0.56% 3.67% 8.18% 8.46%	3.67% 8.18% 8.46%	9.59% 9.87%	0.71%			
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863	Genotype M M M M M M M M B B B B B	0.00% 0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32%	0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.56% 3.67% 8.18% 8.46% 8.46%	3.67% 8.18% 8.46% 8.46%	9.59% 9.87% 9.87%	0.71% 0.71%	0.00%		
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/RA NiV/BD/HU/2008/RA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863 JN808864	Genotype M M M M M M M M B B B B B B B B	0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.00% 0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.00% 0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.00% 0.14% 0.42% 3.53% 8.04% 8.32% 8.32%	0.14% 0.42% 3.53% 8.04% 8.32% 8.32% 8.32%	0.56% 3.67% 8.18% 8.46% 8.46% 8.46%	3.67% 8.18% 8.46% 8.46% 8.46%	9.59% 9.87% 9.87% 9.87%	0.71% 0.71% 0.28%	0.00% 0.99%	0.99%	

Technical Appendix Figure 2B. Estimates of evolutionary divergence between NiV P ORF amino acid sequences. The number of amino acid differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 aa sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 709 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	Μ													
NiV/MY/PI/1999/1413	AJ564622	М	0.00												
NiV/MY/PI/1999/2794	AJ564621	М	0.00	0.00											
NiV/MY/HU/1999/0128	AJ564623	Μ	0.00	0.00	0.00										
NiV/MY/HU/1999/UM1	AY029767	Μ	0.00	0.00	0.00	0.00									
NiV/MY/HU/1999/UM2	AY029768	Μ	0.00	0.00	0.00	0.00	0.00								
NiV/MY/BA/2000/TI	AF376747	Μ	0.00	0.00	0.00	0.00	0.00	0.00							
NiV/MY/PI/1999/0626	AJ627196	Μ	3.00	3.00	3.00	3.00	3.00	3.00	3.00						
NiV/MY/BA/2010/MY	FN869553	М	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00					
NiV/BD/HU/2004/RA1	AY988601	В	70.00	70.00	70.00	70.00	70.00	70.00	70.00	69.00	66.00				
NiV/BD/HU/2008/MA	JN808857	В	70.00	70.00	70.00	70.00	70.00	70.00	70.00	69.00	66.00	2.00			
NiV/BD/HU/2008/RA	JN808863	В	70.00	70.00	70.00	70.00	70.00	70.00	70.00	69.00	66.00	2.00	0.00		
NiV/BD/HU/2010/FA1	JN808864	В	70.00	70.00	70.00	70.00	70.00	70.00	70.00	69.00	66.00	0.00	2.00	2.00	
NiV/IN/HU/2007/FG	FJ513078	В	71.00	71.00	71.00	71.00	71.00	71.00	71.00	70.00	67.00	3.00	1.00	1.00	3.00
Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	M													
NiV/MY/PI/1999/1413	AJ564622	М	0.00%												
NiV/MY/PI/1999/2794	AJ564621	М	0.00%	0.00%											
NiV/MY/HU/1999/0128	AJ564623	М	0.00%	0.00%	0.00%										
NiV/MY/HU/1999/UM1	AY029767	М	0.00%	0.00%	0.00%	0.00%									
NiV/MY/HU/1999/UM2	AY029768	М	0.00%	0.00%	0.00%	0.00%	0.00%								
NiV/MY/BA/2000/TI	AF376747	М	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%							
NiV/MY/PI/1999/0626	AJ627196	М	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%						
NiV/MY/BA/2010/MY	FN869553	М	0.57%	0.57%	0.57%	0.57%	0.57%	0.57%	0.57%	0.47%					
NiV/BD/HU/2004/RA1	AY988601	В	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.52%	6.23%				
NiV/BD/HU/2008/MA	JN808857	В	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.52%	6.23%	0.19%			
NiV/BD/HU/2008/RA	JN808863	В	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.52%	6.23%	0.19%	0.00%		
NiV/BD/HU/2010/FA1	JN808864	В	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.61%	6.52%	6.23%	0.00%	0.19%	0.19%	
NiV/IN/HU/2007/FG	FJ513078	В	6.70%	6.70%	6.70%	6.70%	6.70%	6.70%	6.70%	6.61%	6.33%	0.28%	0.09%	0.09%	0.28%

Technical Appendix Figure 3A. Estimates of evolutionary divergence between NiV M ORF nucleotide sequences. The number of base differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 1,059 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype	е												
NiV/MY/HU/1999/CDC	AF212302	М													
NiV/MY/PI/1999/1413	AJ564622	Μ	0.0												
NiV/MY/PI/1999/2794	AJ564621	М	0.0	0.0											
NiV/MY/HU/1999/0128	AJ564623	М	0.0	0.0	0.0										
NiV/MY/HU/1999/UM1	AY029767	Μ	0.0	0.0	0.0	0.0									
NiV/MY/HU/1999/UM2	AY029768	Μ	0.0	0.0	0.0	0.0	0.0								
NiV/MY/BA/2000/TI	AF376747	М	0.0	0.0	0.0	0.0	0.0	0.0							
NiV/MY/PI/1999/0626	AJ627196	М	1.0	1.0	1.0	1.0	1.0	1.0	1.0						
NiV/MY/BA/2010/MY	FN869553	М	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0					
NiV/BD/HU/2004/RA1	AY988601	В	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0				
NiV/BD/HU/2008/MA	JN808857	В	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	0.0			
NiV/BD/HU/2008/RA	JN808863	В	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	0.0	0.0		
NiV/BD/HU/2010/FA1	JN808864	В	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	0.0	0.0	0.0	
NiV/IN/HU/2007/FG	FJ513078	В	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	1.0	1.0	1.0	1.0
Nipah sequence ID	Accession #	Genotyp	е												
Nipah sequence ID NiV/MY/HU/1999/CDC	Accession # AF212302	Genotype M	e												
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413	Accession # AF212302 AJ564622	Genotype M M	e 0.00%												
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794	Accession # AF212302 AJ564622 AJ564621	Genotyp M M M	e 0.00% 0.00%	0.00%											
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128	Accession # AF212302 AJ564622 AJ564621 AJ564623	Genotype M M M M	e 0.00% 0.00% 0.00%	0.00% 0.00%	0.00%										
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767	Genotype M M M M M	e 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%									
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768	Genotype M M M M M M	e 0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%								
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747	Genotype M M M M M M M	e 0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%							
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196	Genotype M M M M M M M M	e 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.28%	0.00% 0.00% 0.00% 0.00% 0.00% 0.28%	0.00% 0.00% 0.00% 0.00% 0.28%	0.00% 0.00% 0.00% 0.28%	0.00% 0.00% 0.28%	0.00% 0.28%	0.28%						
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553	Genotype M M M M M M M M M	e 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.28% 0.85%	0.00% 0.00% 0.00% 0.00% 0.28% 0.85%	0.00% 0.00% 0.00% 0.28% 0.85%	0.00% 0.00% 0.28% 0.85%	0.00% 0.00% 0.28% 0.85%	0.00% 0.28% 0.85%	0.28% 0.85%	0.57%					
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601	Genotype M M M M M M M M B	e 0.00% 0.00% 0.00% 0.00% 0.00% 0.28% 0.85% 1.14%	0.00% 0.00% 0.00% 0.00% 0.28% 0.85% 1.14%	0.00% 0.00% 0.00% 0.28% 0.85% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14%	0.00% 0.28% 0.85% 1.14%	0.28% 0.85% 1.14%	0.57% 0.85%	0.85%				
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857	Genotype M M M M M M M M B B B	e 0.00% 0.00% 0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14%	0.00% 0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14%	0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14% 1.14%	0.00% 0.28% 0.85% 1.14% 1.14%	0.28% 0.85% 1.14% 1.14%	0.57% 0.85% 0.85%	0.85% 0.85%	0.00%			
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863	Genotype M M M M M M M B B B B B	e 0.00% 0.00% 0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.28% 0.85% 1.14% 1.14% 1.14%	0.57% 0.85% 0.85% 0.85%	0.85% 0.85% 0.85%	0.00% 0.00%	0.00%		
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA NiV/BD/HU/2010/FA1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863 JN808864	Genotype M M M M M M M B B B B B B B B	e 0.00% 0.00% 0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.00% 0.28% 0.85% 1.14% 1.14% 1.14%	0.00% 0.28% 0.85% 1.14% 1.14% 1.14% 1.14%	0.28% 0.85% 1.14% 1.14% 1.14% 1.14%	0.57% 0.85% 0.85% 0.85% 0.85%	0.85% 0.85% 0.85% 0.85%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%	

Technical Appendix Figure 3B. Estimates of evolutionary divergence between NiV M ORF amino acid sequences. The number of amino acid differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 aa sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 352 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	М													
NiV/MY/PI/1999/1413	AJ564622	М	0.00												
NiV/MY/PI/1999/2794	AJ564621	М	1.00	1.00											
NiV/MY/HU/1999/0128	AJ564623	М	0.00	0.00	1.00										
NiV/MY/HU/1999/UM1	AY029767	М	0.00	0.00	1.00	0.00									
NiV/MY/HU/1999/UM2	AY029768	М	0.00	0.00	1.00	0.00	0.00								
NiV/MY/BA/2000/TI	AF376747	М	1.00	1.00	2.00	1.00	1.00	1.00							
NiV/MY/PI/1999/0626	AJ627196	М	4.00	4.00	5.00	4.00	4.00	4.00	5.00						
NiV/MY/BA/2010/MY	FN869553	М	10.00	10.00	11.00	10.00	10.00	10.00	11.00	14.00					
NiV/BD/HU/2004/RA1	AY988601	В	107.00	107.00	108.00	107.00	107.00	107.00	108.00	109.00	107.00				
NiV/BD/HU/2008/MA	JN808857	В	109.00	109.00	110.00	109.00	109.00	109.00	110.00	111.00	109.00	16.00			
NiV/BD/HU/2008/RA	JN808863	В	109.00	109.00	110.00	109.00	109.00	109.00	110.00	111.00	109.00	16.00	0.00		
NiV/BD/HU/2010/FA1	JN808864	В	105.00	105.00	106.00	105.00	105.00	105.00	106.00	107.00	105.00	8.00	14.00	14.00	
NiV/IN/HU/2007/FG	FJ513078	В	106.00	106.00	107.00	106.00	106.00	106.00	107.00	108.00	106.00	11.00	5.00	5.00	9.00
Nipah sequence ID	Accession #	Genotype													
Nipah sequence ID NiV/MY/HU/1999/CDC	Accession # AF212302	Genotype M													
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413	Accession # AF212302 AJ564622	Genotype M M	0.00%												
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794	Accession # AF212302 AJ564622 AJ564621	Genotype M M M	0.00% 0.06%	0.06%											
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128	Accession # AF212302 AJ564622 AJ564621 AJ564623	Genotype M M M M	0.00% 0.06% 0.00%	0.06% 0.00%	0.06%										
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767	Genotype M M M M M	0.00% 0.06% 0.00% 0.00%	0.06% 0.00% 0.00%	0.06% 0.06%	0.00%									
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768	Genotype M M M M M M	0.00% 0.06% 0.00% 0.00%	0.06% 0.00% 0.00% 0.00%	0.06% 0.06% 0.06%	0.00% 0.00%	0.00%								
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747	Genotype M M M M M M M	0.00% 0.06% 0.00% 0.00% 0.00% 0.06%	0.06% 0.00% 0.00% 0.00% 0.06%	0.06% 0.06% 0.06% 0.12%	0.00% 0.00% 0.06%	0.00% 0.06%	0.06%							
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196	Genotype M M M M M M M M	0.00% 0.06% 0.00% 0.00% 0.06% 0.24%	0.06% 0.00% 0.00% 0.06% 0.24%	0.06% 0.06% 0.12% 0.30%	0.00% 0.00% 0.06% 0.24%	0.00% 0.06% 0.24%	0.06% 0.24%	0.30%						
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553	Genotype M M M M M M M M M	0.00% 0.06% 0.00% 0.00% 0.06% 0.24% 0.61%	0.06% 0.00% 0.00% 0.06% 0.24% 0.61%	0.06% 0.06% 0.12% 0.30% 0.67%	0.00% 0.00% 0.06% 0.24% 0.61%	0.00% 0.06% 0.24% 0.61%	0.06% 0.24% 0.61%	0.30% 0.67%	0.85%					
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601	Genotype M M M M M M M M M B	0.00% 0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52%	0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52%	0.06% 0.06% 0.12% 0.30% 0.67% 6.58%	0.00% 0.00% 0.06% 0.24% 0.61% 6.52%	0.00% 0.06% 0.24% 0.61% 6.52%	0.06% 0.24% 0.61% 6.52%	0.30% 0.67% 6.58%	0.85% 6.64%	6.52%				
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857	Genotype M M M M M M M M B B B	0.00% 0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52% 6.64%	0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52% 6.64%	0.06% 0.06% 0.12% 0.30% 0.67% 6.58% 6.70%	0.00% 0.00% 0.24% 0.61% 6.52% 6.64%	0.00% 0.06% 0.24% 0.61% 6.52% 6.64%	0.06% 0.24% 0.61% 6.52% 6.64%	0.30% 0.67% 6.58% 6.70%	0.85% 6.64% 6.76%	6.52% 6.64%	0.98%			
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA	Accession # AF212302 AJ564622 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863	Genotype M M M M M M M M B B B B B	0.00% 0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52% 6.64%	0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52% 6.64%	0.06% 0.06% 0.12% 0.30% 0.67% 6.58% 6.70%	0.00% 0.00% 0.24% 0.61% 6.52% 6.64%	0.00% 0.06% 0.24% 0.61% 6.52% 6.64%	0.06% 0.24% 0.61% 6.52% 6.64%	0.30% 0.67% 6.58% 6.70% 6.70%	0.85% 6.64% 6.76% 6.76%	6.52% 6.64% 6.64%	0.98% 0.98%	0.00%		
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/RA NiV/BD/HU/2008/RA	Accession # AF212302 AJ564622 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY988601 JN808857 JN808863 JN808864	Genotype M M M M M M M M B B B B B B B B B	0.00% 0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52% 6.64% 6.64% 6.40%	0.06% 0.00% 0.00% 0.06% 0.24% 0.61% 6.52% 6.64% 6.64% 6.40%	0.06% 0.06% 0.12% 0.30% 0.67% 6.58% 6.70% 6.70% 6.46%	0.00% 0.00% 0.24% 0.61% 6.52% 6.64% 6.64% 6.40%	0.00% 0.06% 0.24% 0.61% 6.52% 6.64% 6.64% 6.40%	0.06% 0.24% 0.61% 6.52% 6.64% 6.64% 6.40%	0.30% 0.67% 6.58% 6.70% 6.70% 6.46%	0.85% 6.64% 6.76% 6.76% 6.52%	6.52% 6.64% 6.64% 6.40%	0.98% 0.98% 0.49%	0.00% 0.85%	0.85%	

Technical Appendix Figure 4A. Estimates of evolutionary divergence between NiV F ORF nucleotide sequences. The number of base differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 1,641 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	М													
NiV/MY/PI/1999/1413	AJ564622	М	0.00												
NiV/MY/PI/1999/2794	AJ564621	М	0.00	0.00											
NiV/MY/HU/1999/0128	AJ564623	М	0.00	0.00	0.00										
NiV/MY/HU/1999/UM1	AY029767	М	0.00	0.00	0.00	0.00									
NiV/MY/HU/1999/UM2	AY029768	М	0.00	0.00	0.00	0.00	0.00								
NiV/MY/BA/2000/TI	AF376747	М	1.00	1.00	1.00	1.00	1.00	1.00							
NiV/MY/PI/1999/0626	AJ627196	М	1.00	1.00	1.00	1.00	1.00	1.00	2.00						
NiV/MY/BA/2010/MY	FN869553	М	3.00	3.00	3.00	3.00	3.00	3.00	4.00	4.00					
NiV/BD/HU/2004/RA1	AY988601	В	8.00	8.00	8.00	8.00	8.00	8.00	9.00	9.00	9.00				
NiV/BD/HU/2008/MA	JN808857	В	7.00	7.00	7.00	7.00	7.00	7.00	8.00	8.00	8.00	3.00			
NiV/BD/HU/2008/RA	JN808863	В	7.00	7.00	7.00	7.00	7.00	7.00	8.00	8.00	8.00	3.00	0.00		
NiV/BD/HU/2010/FA1	JN808864	В	6.00	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	2.00	1.00	1.00	
NiV/IN/HU/2007/FG	FJ513078	В	7.00	7.00	7.00	7.00	7.00	7.00	8.00	8.00	8.00	3.00	0.00	0.00	1.00
Nipah sequence ID	Accession #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	M													
NiV/MY/PI/1999/1413	AJ564622	M	0.00%												
NiV/MY/PI/1999/2794	AJ564621	M	0.00%	0.00%											
NiV/MY/HU/1999/0128	AJ564623	М	0.00%	0.00%	0.00%										
NiV/MY/HU/1999/UM1	AY029767	М	0.00%	0.00%	0.00%	0.00%									
NiV/MY/HU/1999/UM2	AY029768	М	0.00%	0.00%	0.00%	0.00%	0.00%								
NiV/MY/BA/2000/TI	AF376747	М	0.18%	0.18%	0.18%	0.18%	0.18%	0.18%							
NiV/MY/PI/1999/0626	AJ627196	М	0.18%	0.18%	0.18%	0.18%	0.18%	0.18%	0.37%						
NiV/MY/BA/2010/MY	FN869553	М	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.73%	0.73%					
NiV/BD/HU/2004/RA1	AY988601	В	1.47%	1.47%	1.47%	1.47%	1.47%	1.47%	1.65%	1.65%	1.65%				
NiV/BD/HU/2008/MA	JN808857	В	1.28%	1.28%	1.28%	1.28%	1.28%	1.28%	1.47%	1.47%	1.47%	0.55%			

Technical Appendix Figure 4B. Estimates of evolutionary divergence between NiV F ORF amino acid sequences. The number of amino acid differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 aa sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 546 positions in the final dataset.

1.28% 1.28% 1.28% 1.28% 1.28% 1.28% 1.47% 1.47% 1.47% 0.55%

1.28% 1.28% 1.28% 1.28% 1.28% 1.28% 1.47% 1.47% 1.47% 0.55% 0.00%

1.10% 1.10% 1.10% 1.10% 1.10% 1.28% 1.28% 1.28% 0.37% 0.18% 0.18%

1.28% 1.28% 1.28% 1.28% 1.28% 1.28% 1.47% 1.47% 1.47% 0.55% 0.00% 0.00% 0.18%

В

В

В

JN808863

JN808864

FJ513078

NiV/BD/HU/2008/RA

NiV/BD/HU/2010/FA1

NiV/IN/HU/2007/FG

Nipah sequence ID	Accession #	Genotype														
NiV/MY/HU/1999/CDC	AF212302	М														
NiV/MY/PI/1999/1413	AJ564622	М	0.0													
NiV/MY/PI/1999/2794	AJ564621	М	1.0	1.0												
NiV/MY/HU/1999/0128	AJ564623	М	1.0	1.0	0.0											
NiV/MY/HU/1999/UM1	AY029767	М	0.0	0.0	1.0	1.0										
NiV/MY/HU/1999/UM2	AY029768	М	0.0	0.0	1.0	1.0	0.0									
NiV/MY/BA/2000/TI	AF376747	М	2.0	2.0	1.0	1.0	2.0	2.0								
NiV/MY/PI/1999/0626	AJ627196	М	4.0	4.0	5.0	5.0	4.0	4.0	6.0							
NiV/MY/BA/2010/MY	FN869553	М	13.0	13.0	14.0	14.0	13.0	13.0	15.0	13.0						
NiV/KH/BA/2004/KHM	AY858111	М	33.0	33.0	34.0	34.0	33.0	33.0	35.0	35.0	32.0					
NiV/BD/HU/2004/RA1	AY988601	В	126.0	126.0	127.0	127.0	126.0	126.0	128.0	126.0	122.0	121.0				
NiV/BD/HU/2008/MA	JN808857	В	131.0	131.0	132.0	132.0	131.0	131.0	133.0	131.0	127.0	126.0	7.0			
NiV/BD/HU/2008/RA	JN808863	В	131.0	131.0	132.0	132.0	131.0	131.0	133.0	131.0	127.0	126.0	7.0	0.0		
NiV/BD/HU/2010/FA1	JN808864	В	128.0	128.0	129.0	129.0	128.0	128.0	130.0	128.0	124.0	123.0	3.0	10.0	10.0	
NiV/IN/HU/2007/FG	FJ513078	В	129.0	129.0	130.0	130.0	129.0	129.0	131.0	129.0	125.0	124.0	7.0	8.0	8.0	10.0
Ninch coguenee ID	Accession #	Constune														
Nipah sequence ID	Accession #	Genotype														
Nipah sequence ID NiV/MY/HU/1999/CDC	Accession # AF212302	Genotype M	0.009/													
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413	Accession # AF212302 AJ564622	Genotype M M	0.00%	0.000/												
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794	Accession # AF212302 AJ564622 AJ564621	Genotype M M M	0.00%	0.06%	0.000/											
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128	Accession # AF212302 AJ564622 AJ564621 AJ564623 AV020767	Genotype M M M M	0.00% 0.06% 0.06%	0.06% 0.06%	0.00%	0.06%										
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029767	Genotype M M M M M	0.00% 0.06% 0.06% 0.00%	0.06% 0.06% 0.00%	0.00% 0.06%	0.06%	0.00%									
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747	Genotype M M M M M M	0.00% 0.06% 0.00% 0.00% 0.00%	0.06% 0.06% 0.00% 0.00%	0.00% 0.06% 0.06%	0.06% 0.06%	0.00%	0 11%								
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 A I627196	Genotype M M M M M M M	0.00% 0.06% 0.00% 0.00% 0.11% 0.22%	0.06% 0.06% 0.00% 0.00% 0.11%	0.00% 0.06% 0.06% 0.06%	0.06% 0.06% 0.06%	0.00% 0.11% 0.22%	0.11%	0 33%							
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 EN869553	Genotype M M M M M M M M	0.00% 0.06% 0.00% 0.00% 0.11% 0.22% 0.72%	0.06% 0.06% 0.00% 0.11% 0.22% 0.72%	0.00% 0.06% 0.06% 0.06% 0.28% 0.77%	0.06% 0.06% 0.28% 0.77%	0.00% 0.11% 0.22% 0.72%	0.11% 0.22% 0.72%	0.33%	0 72%						
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/KH/BA/2010/MY	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111	Genotype M M M M M M M M M	0.00% 0.06% 0.00% 0.00% 0.11% 0.22% 0.72% 1 82%	0.06% 0.06% 0.00% 0.00% 0.11% 0.22% 0.72% 1.82%	0.00% 0.06% 0.06% 0.28% 0.77% 1.88%	0.06% 0.06% 0.28% 0.77% 1.88%	0.00% 0.11% 0.22% 0.72% 1.82%	0.11% 0.22% 0.72% 1.82%	0.33% 0.83% 1 93%	0.72%	1 77%					
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/KH/BA/2004/KAM	Accession # AF212302 AJ564622 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601	Genotype M M M M M M M M M B	0.00% 0.06% 0.00% 0.00% 0.11% 0.22% 0.72% 1.82% 6 97%	0.06% 0.06% 0.00% 0.11% 0.22% 0.72% 1.82% 6.97%	0.00% 0.06% 0.06% 0.28% 0.77% 1.88% 7.02%	0.06% 0.06% 0.28% 0.77% 1.88% 7.02%	0.00% 0.11% 0.22% 0.72% 1.82% 6 97%	0.11% 0.22% 0.72% 1.82% 6 97%	0.33% 0.83% 1.93% 7.08%	0.72% 1.93% 6 97%	1.77% 6 74%	6 69%				
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA	Accession # AF212302 AJ564622 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601 JN808857	Genotype M M M M M M M M M B B B	0.00% 0.06% 0.00% 0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7 24%	0.06% 0.06% 0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24%	0.00% 0.06% 0.06% 0.28% 0.77% 1.88% 7.02% 7.30%	0.06% 0.06% 0.28% 0.77% 1.88% 7.02% 7.30%	0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24%	0.11% 0.22% 0.72% 1.82% 6.97% 7 24%	0.33% 0.83% 1.93% 7.08% 7.35%	0.72% 1.93% 6.97% 7 24%	1.77% 6.74% 7 02%	6.69% 6 97%	0.39%			
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/2794 NiV/MY/HU/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/BD/HU/2008/MA NiV/BD/HU/2008/MA	Accession # AF212302 AJ564622 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601 JN808857 JN808863	Genotype M M M M M M M M M B B B B B B	0.00% 0.06% 0.00% 0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24%	0.06% 0.06% 0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24%	0.00% 0.06% 0.06% 0.28% 0.77% 1.88% 7.02% 7.30%	0.06% 0.06% 0.28% 0.77% 1.88% 7.02% 7.30% 7.30%	0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24% 7.24%	0.11% 0.22% 0.72% 1.82% 6.97% 7.24% 7.24%	0.33% 0.83% 1.93% 7.08% 7.35% 7.35%	0.72% 1.93% 6.97% 7.24% 7 24%	1.77% 6.74% 7.02% 7.02%	6.69% 6.97% 6.97%	0.39%	0 00%		
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/2794 NiV/MY/HU/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/RA NiV/BD/HU/2008/RA NiV/BD/HU/2010/FA1	Accession # AF212302 AJ564622 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601 JN808857 JN808863 JN808864	Genotype M M M M M M M M B B B B B B B B B B B	0.00% 0.06% 0.00% 0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24% 7.24% 7.08%	0.06% 0.00% 0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24% 7.24% 7.24%	0.00% 0.06% 0.06% 0.28% 0.77% 1.88% 7.02% 7.30% 7.30% 7.13%	0.06% 0.06% 0.28% 0.77% 1.88% 7.02% 7.30% 7.30% 7.13%	0.00% 0.11% 0.22% 0.72% 1.82% 6.97% 7.24% 7.24% 7.24%	0.11% 0.22% 0.72% 1.82% 6.97% 7.24% 7.24% 7.24%	0.33% 0.83% 1.93% 7.08% 7.35% 7.35% 7.19%	0.72% 1.93% 6.97% 7.24% 7.24% 7.08%	1.77% 6.74% 7.02% 6.85%	6.69% 6.97% 6.97% 6.80%	0.39% 0.39% 0.17%	0.00%	0.55%	

Technical Appendix Figure 5A. Estimates of evolutionary divergence between NiV G ORF nucleotide sequences. The number of base differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 15 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 1,809 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype														
NiV/MY/HU/1999/CDC	AF212302	M														
NiV/MY/PI/1999/1413	AJ564622	М	0.00													
NiV/MY/PI/1999/2794	AJ564621	М	0.00	0.00												
NiV/MY/HU/1999/0128	AJ564623	М	0.00	0.00	0.00											
NiV/MY/HU/1999/UM1	AY029767	М	0.00	0.00	0.00	0.00										
NiV/MY/HU/1999/UM2	AY029768	М	0.00	0.00	0.00	0.00	0.00									
NiV/MY/BA/2000/TI	AF376747	М	0.00	0.00	0.00	0.00	0.00	0.00								
NiV/MY/PI/1999/0626	AJ627196	М	2.00	2.00	2.00	2.00	2.00	2.00	2.00							
NiV/MY/BA/2010/MY	FN869553	М	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00						
NiV/KH/BA/2004/KHM	AY858111	М	9.00	9.00	9.00	9.00	9.00	9.00	9.00	11.00	9.00					
NiV/BD/HU/2004/RA1	AY988601	В	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	24.00	27.00				
NiV/BD/HU/2008/MA	JN808857	В	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	24.00	27.00	0.00			
NiV/BD/HU/2008/RA	JN808863	В	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	24.00	27.00	0.00	0.00		
NiV/BD/HU/2010/FA1	JN808864	В	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	25.00	28.00	1.00	1.00	1.00	
NiV/IN/HU/2007/FG	FJ513078	В	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	25.00	28.00	1.00	1.00	1.00	2.00
Ninch coguenes ID	Accession #	Constune														
Nipah sequence ID	Accession #	Genotype														
Nipah sequence ID NiV/MY/HU/1999/CDC	Accession # AF212302	Genotype M	0.00%													
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413	Accession # AF212302 AJ564622	Genotype M M	0.00%	0.00%												
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794	Accession # AF212302 AJ564622 AJ564621 AJ564621	Genotype M M M	0.00% 0.00%	0.00%	0.00%											
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128	Accession # AF212302 AJ564622 AJ564621 AJ564623 AV020767	Genotype M M M M	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%	0.00%										
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768	Genotype M M M M M	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%	0.00%									
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/HU/1999/UM2	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747	Genotype M M M M M M	0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00%	0.00%	0.00%								
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 A I627196	Genotype M M M M M M M	0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00%	0.00% 0.00% 0.33%	0.00%	0 33%							
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/PI/1999/0626 NiV/MY/PI/1999/0626	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 EN869553	Genotype M M M M M M M M	0.00% 0.00% 0.00% 0.00% 0.00% 0.33%	0.00% 0.00% 0.00% 0.00% 0.33% 1.00%	0.00% 0.00% 0.00% 0.33% 1.00%	0.00% 0.00% 0.33% 1.00%	0.00% 0.00% 0.33% 1.00%	0.00% 0.33% 1.00%	0.33%	1.00%						
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111	Genotype M M M M M M M M M M	0.00% 0.00% 0.00% 0.00% 0.00% 0.33% 1.00%	0.00% 0.00% 0.00% 0.00% 0.33% 1.00%	0.00% 0.00% 0.00% 0.33% 1.00%	0.00% 0.00% 0.33% 1.00%	0.00% 0.00% 0.33% 1.00%	0.00% 0.33% 1.00%	0.33% 1.00% 1.50%	1.00%	1 50%					
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/KH/BA/2004/KHM	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601	Genotype M M M M M M M M M M B	0.00% 0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50%	0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50%	0.00% 0.00% 0.00% 0.33% 1.00% 1.50%	0.00% 0.00% 0.33% 1.00% 1.50%	0.00% 0.00% 0.33% 1.00% 1.50%	0.00% 0.33% 1.00% 1.50%	0.33% 1.00% 1.50%	1.00% 1.83% 4.32%	1.50%	4 49%				
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601 JN808857	Genotype M M M M M M M M M B B B	0.00% 0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32%	0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32%	0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32%	0.00% 0.00% 0.33% 1.00% 1.50% 4.32%	0.00% 0.00% 0.33% 1.00% 1.50% 4.32%	0.00% 0.33% 1.00% 1.50% 4.32%	0.33% 1.00% 1.50% 4.32%	1.00% 1.83% 4.32%	1.50% 3.99% 3.99%	4.49% 4.49%	0.00%			
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/BD/HU/2008/MA NiV/BD/HU/2008/MA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601 JN808857 JN808863	Genotype M M M M M M M M M B B B B B	0.00% 0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32%	0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32%	0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32%	0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32%	0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32%	0.00% 0.33% 1.00% 1.50% 4.32% 4.32%	0.33% 1.00% 1.50% 4.32% 4.32%	1.00% 1.83% 4.32% 4.32%	1.50% 3.99% 3.99%	4.49% 4.49% 4.49%	0.00%	0.00%		
Nipah sequence ID NiV/MY/HU/1999/CDC NiV/MY/PI/1999/1413 NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/BA/2000/TI NiV/MY/BA/2000/TI NiV/MY/BA/2010/MY NiV/MY/BA/2010/MY NiV/KH/BA/2004/KHM NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA NiV/BD/HU/2008/RA	Accession # AF212302 AJ564622 AJ564621 AJ564623 AY029767 AY029768 AF376747 AJ627196 FN869553 AY858111 AY988601 JN808857 JN808863 JN808864	Genotype M M M M M M M M M B B B B B B B B B B	0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32% 4.32%	0.00% 0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32% 4.32%	0.00% 0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32% 4.32% 4.32%	0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32% 4.32% 4.32%	0.00% 0.00% 0.33% 1.00% 1.50% 4.32% 4.32% 4.32% 4.32%	0.00% 0.33% 1.00% 1.50% 4.32% 4.32% 4.32%	0.33% 1.00% 1.50% 4.32% 4.32% 4.32%	1.00% 1.83% 4.32% 4.32% 4.32%	1.50% 3.99% 3.99% 4.15%	4.49% 4.49% 4.49% 4.65%	0.00% 0.00% 0.17%	0.00%	0 17%	

Technical Appendix Figure 5B. Estimates of evolutionary divergence between NiV G ORF amino acid sequences. The number of amino acid differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 15 as sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 602 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype												
NiV/MY/HU/1999/CDC	AF212302	Μ												
NiV/MY/PI/1999/1413	AJ564622	Μ	1.0											
NiV/MY/PI/1999/2794	AJ564621	Μ	1.0	2.0										
NiV/MY/HU/1999/0128	AJ564623	Μ	2.0	3.0	1.0									
NiV/MY/HU/1999/UM1	AY029767	Μ	1.0	2.0	0.0	1.0								
NiV/MY/HU/1999/UM2	AY029768	Μ	1.0	2.0	2.0	3.0	2.0							
NiV/MY/PI/1999/0626	AJ627196	Μ	12.0	13.0	11.0	12.0	11.0	13.0						
NiV/MY/BA/2010/MY	FN869553	М	12.0	13.0	11.0	12.0	11.0	13.0	0.0					
NiV/BD/HU/2004/RA1	AY988601	В	441.0	440.0	441.0	442.0	441.0	442.0	446.0	446.0				
NiV/BD/HU/2008/MA	JN808857	В	435.0	434.0	435.0	436.0	435.0	436.0	440.0	440.0	53.0			
NiV/BD/HU/2008/RA	JN808863	В	435.0	434.0	435.0	436.0	435.0	436.0	440.0	440.0	53.0	0.0		
NiV/BD/HU/2010/FA1	JN808864	В	445.0	444.0	445.0	446.0	445.0	446.0	450.0	450.0	16.0	55.0	55.0	
NiV/IN/HU/2007/FG	FJ513078	В	432.0	431.0	432.0	433.0	432.0	433.0	437.0	437.0	47.0	19.0	19.0	49.0
Nipah sequence ID	Accession #	Genotype												
NiV/MY/HU/1999/CDC	AF212302	M												
NiV/MY/PI/1999/1413	AJ564622	М	0.01%											
		1.4.1	0.01/0											
NiV/MY/PI/1999/2794	AJ564621	M	0.01%	0.03%										
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128	AJ564621 AJ564623	M	0.01% 0.03%	0.03% 0.04%	0.01%									
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1	AJ564621 AJ564623 AY029767	M M M	0.01% 0.03% 0.01%	0.03% 0.04% 0.03%	0.01% 0.00%	0.01%								
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2	AJ564621 AJ564623 AY029767 AY029768	M M M M	0.01% 0.03% 0.01% 0.01%	0.03% 0.04% 0.03% 0.03%	0.01% 0.00% 0.03%	0.01% 0.04%	0.03%							
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/PI/1999/0626	AJ564621 AJ564623 AY029767 AY029768 AJ627196	M M M M M	0.01% 0.03% 0.01% 0.01% 0.18%	0.03% 0.04% 0.03% 0.03% 0.19%	0.01% 0.00% 0.03% 0.16%	0.01% 0.04% 0.18%	0.03% 0.16%	0.19%						
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY	AJ564621 AJ564623 AY029767 AY029768 AJ627196 FN869553	M M M M M	0.01% 0.03% 0.01% 0.01% 0.18% 0.18%	0.03% 0.04% 0.03% 0.03% 0.19% 0.19%	0.01% 0.00% 0.03% 0.16% 0.16%	0.01% 0.04% 0.18% 0.18%	0.03% 0.16% 0.16%	0.19% 0.19%	0.00%					
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1	AJ564621 AJ564623 AY029767 AY029768 AJ627196 FN869553 AY988601	M M M M M B	0.01% 0.03% 0.01% 0.01% 0.18% 0.18% 6.55%	0.03% 0.04% 0.03% 0.03% 0.19% 0.19% 6.53%	0.01% 0.00% 0.03% 0.16% 6.55%	0.01% 0.04% 0.18% 0.18% 6.56%	0.03% 0.16% 0.16% 6.55%	0.19% 0.19% 6.56%	0.00% 6.62%	6.62%				
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA	AJ564621 AJ564623 AY029767 AY029768 AJ627196 FN869553 AY988601 JN808857	M M M M B B	0.01% 0.03% 0.01% 0.01% 0.18% 0.18% 6.55% 6.46%	0.03% 0.04% 0.03% 0.19% 0.19% 6.53% 6.44%	0.01% 0.00% 0.03% 0.16% 6.55% 6.46%	0.01% 0.04% 0.18% 0.18% 6.56% 6.47%	0.03% 0.16% 0.16% 6.55% 6.46%	0.19% 0.19% 6.56% 6.47%	0.00% 6.62% 6.53%	6.62% 6.53%	0.79%			
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA	AJ564621 AJ564623 AY029767 AY029768 AJ627196 FN869553 AY988601 JN808857 JN808863	M M M M B B B B B	0.01% 0.03% 0.01% 0.01% 0.18% 0.18% 6.55% 6.46% 6.46%	0.03% 0.04% 0.03% 0.19% 0.19% 6.53% 6.44% 6.44%	0.01% 0.00% 0.03% 0.16% 6.55% 6.46% 6.46%	0.01% 0.04% 0.18% 0.18% 6.56% 6.47% 6.47%	0.03% 0.16% 0.16% 6.55% 6.46% 6.46%	0.19% 0.19% 6.56% 6.47% 6.47%	0.00% 6.62% 6.53% 6.53%	6.62% 6.53% 6.53%	0.79% 0.79%	0.00%		
NiV/MY/PI/1999/2794 NiV/MY/HU/1999/0128 NiV/MY/HU/1999/UM1 NiV/MY/HU/1999/UM2 NiV/MY/PI/1999/0626 NiV/MY/BA/2010/MY NiV/BD/HU/2004/RA1 NiV/BD/HU/2008/MA NiV/BD/HU/2008/RA NiV/BD/HU/2010/FA1	AJ564621 AJ564623 AY029767 AY029768 AJ627196 FN869553 AY988601 JN808857 JN808863 JN808864	M M M M B B B B B B B B	0.01% 0.03% 0.01% 0.01% 0.18% 0.18% 6.55% 6.46% 6.46% 6.61%	0.03% 0.04% 0.03% 0.19% 0.19% 6.53% 6.44% 6.44% 6.59%	0.01% 0.00% 0.03% 0.16% 6.55% 6.46% 6.46% 6.61%	0.01% 0.04% 0.18% 0.18% 6.56% 6.47% 6.47% 6.62%	0.03% 0.16% 0.16% 6.55% 6.46% 6.46% 6.61%	0.19% 0.19% 6.56% 6.47% 6.47% 6.62%	0.00% 6.62% 6.53% 6.53% 6.68%	6.62% 6.53% 6.53% 6.68%	0.79% 0.79% 0.24%	0.00% 0.82%	0.82%	

Technical Appendix Figure 6A. Estimates of evolutionary divergence between NiV L ORF nucleotide sequences. The number of base differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 nt sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 6,735 positions in the final dataset.

Nipah sequence ID	Accession #	Genotype												
NiV/MY/HU/1999/CDC	AF212302	M												
NiV/MY/PI/1999/1413	AJ564622	М	0.0											
NiV/MY/PI/1999/2794	AJ564621	Μ	1.0	1.0										
NiV/MY/HU/1999/0128	AJ564623	Μ	1.0	1.0	0.0									
NiV/MY/HU/1999/UM1	AY029767	Μ	1.0	1.0	0.0	0.0								
NiV/MY/HU/1999/UM2	AY029768	Μ	0.0	0.0	1.0	1.0	1.0							
NiV/MY/PI/1999/0626	AJ627196	Μ	4.0	4.0	3.0	3.0	3.0	4.0						
NiV/MY/BA/2010/MY	FN869553	Μ	4.0	4.0	3.0	3.0	3.0	4.0	0.0					
NiV/BD/HU/2004/RA1	AY988601	В	39.0	39.0	39.0	39.0	39.0	39.0	42.0	42.0				
NiV/BD/HU/2008/MA	JN808857	В	34.0	34.0	34.0	34.0	34.0	34.0	37.0	37.0	7.0			
NiV/BD/HU/2008/RA	JN808863	В	34.0	34.0	34.0	34.0	34.0	34.0	37.0	37.0	7.0	0.0		
NiV/BD/HU/2010/FA1	JN808864	В	40.0	40.0	40.0	40.0	40.0	40.0	43.0	43.0	3.0	10.0	10.0	
NiV/IN/HU/2007/FG	FJ513078	В	33.0	33.0	33.0	33.0	33.0	33.0	36.0	36.0	6.0	1.0	1.0	9.0
Ninah soquonoo ID	Accession #	Conotypo												

Nipali sequence ib	ACCESSION #	Genotype													
NiV/MY/HU/1999/CDC	AF212302	М													
NiV/MY/PI/1999/1413	AJ564622	М	0.00%												
NiV/MY/PI/1999/2794	AJ564621	М	0.04%	0.04%											
NiV/MY/HU/1999/0128	AJ564623	М	0.04%	0.04%	0.00%										
NiV/MY/HU/1999/UM1	AY029767	М	0.04%	0.04%	0.00%	0.00%									
NiV/MY/HU/1999/UM2	AY029768	М	0.00%	0.00%	0.04%	0.04%	0.04%								
NiV/MY/PI/1999/0626	AJ627196	М	0.18%	0.18%	0.13%	0.13%	0.13%	0.18%							
NiV/MY/BA/2010/MY	FN869553	М	0.18%	0.18%	0.13%	0.13%	0.13%	0.18%	0.00%						
NiV/BD/HU/2004/RA1	AY988601	В	1.74%	1.74%	1.74%	1.74%	1.74%	1.74%	1.87%	1.87%					
NiV/BD/HU/2008/MA	JN808857	В	1.52%	1.52%	1.52%	1.52%	1.52%	1.52%	1.65%	1.65%	0.31%				
NiV/BD/HU/2008/RA	JN808863	В	1.52%	1.52%	1.52%	1.52%	1.52%	1.52%	1.65%	1.65%	0.31%	0.00%			
NiV/BD/HU/2010/FA1	JN808864	В	1.78%	1.78%	1.78%	1.78%	1.78%	1.78%	1.92%	1.92%	0.13%	0.45%	0.45%		
NiV/IN/HU/2007/FG	FJ513078	В	1.47%	1.47%	1.47%	1.47%	1.47%	1.47%	1.60%	1.60%	0.27%	0.04%	0.04%	0.40%	

Technical Appendix Figure 6B. Estimates of evolutionary divergence between NiV L ORF amino acid sequences. The number of amino acid differences (top matrix) and percentage of difference (bottom matrix) per sequence from between sequences are shown. SE estimate(s) are shown above the diagonal. The analysis involved 14 aa sequences. Codon positions included were 1st+2nd+3rd+noncoding. There were a total of 2,244 positions in the final dataset.