

**Report from the Molecular Epidemiology Section of the Dept. of Exotic Disease Control to  
the Head of the World Reference Laboratory for FMD (Non-QAU Form)**

Serotype: <b>O</b>		Report date: 10/02/2004					
Virus isolate: <b>HKN/2/2003</b>							
Material used: 10% epith. susp.							
Region sequenced: VP1		Topotype: Cathay					
RT-PCR primers: O-1C272/NK61		Genotype/strain: not designated					
No. of nt determined: 637		Seq. filename: HKN03-02					
No. nt in gene: 639		Date sequence last updated: 30/01/2004					
No. of ambiguities: 2		Total no. of comparisons made: 1328					
Comments:							
<b>Ten Most Closely Related Viruses</b>							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/3/2003	HKN03-03	637	633	2	99.37	0.63
2	O/HKN/19/2001	HKN01-19	635	623	4	98.11	1.89
3	O/HKN/4/2002	HKN02-04	577	566	2	98.09	1.91
4	O/HKN/2002 [AF525458]	HKN02-AA	637	622	2	97.65	2.35
5	O/HKN/1/2002	HKN02-01	636	621	3	97.64	2.36
6	O/HKN/9/2002	HKN02-09	407	397	3	97.54	2.46
7	O/HKN/3/2002	HKN02-03	635	617	4	97.17	2.83
8	O/HKN/8/2002	HKN02-08	578	560	5	96.89	3.11
9	O/HKN/4/2001	HKN01-04	636	616	3	96.86	3.14
10	O/HKN/4/99	HKN99-04	476	455	10	95.59	4.41
<b>Relationships to Reference Virus Strains</b>							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	516	475	6	92.05	7.95
2	O/HKN/6/83	HKN83-06	635	550	4	86.61	13.39
3	O/MOR/1/91	MOR91-01	207	170	3	82.13	17.87
4	O/ISR/1/88	ISR88-01	193	158	5	81.87	18.13
5	O/IND/53/79	IND79A53	637	520	2	81.63	18.37
6	O/TAW/2/99	TAW99-02	637	513	2	80.53	19.47
7	O1/Manisa/TUR/69	TUR69--E	637	510	2	80.06	19.94
8	O/TAI/189/87*	TAI87--B	526	415	4	78.90	21.10
9	O/IND/R2/75*	IND75--A	637	500	2	78.49	21.51
10	O1/BFS 1860/UK/67	UKG67--A	637	490	2	76.92	23.08
nt, nucleotides							
*, not a WRLFMD reference number							

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Virus isolate: <b>HKN/3/2003</b>	
Material used: 10% epith. susp.	
Region sequenced: VP1	Topotype: Cathay
RT-PCR primers: O-1C272/NK61 & O-1C283/NK61	Genotype/strain: not designated
No. of nt determined: 638	Seq. filename: HKN03-03
No. nt in gene: 639	Date sequence last updated: 30/01/2004
No. of ambiguities: 1	Total no. of comparisons made: 1328

Comments:

**Ten Most Closely Related Viruses**

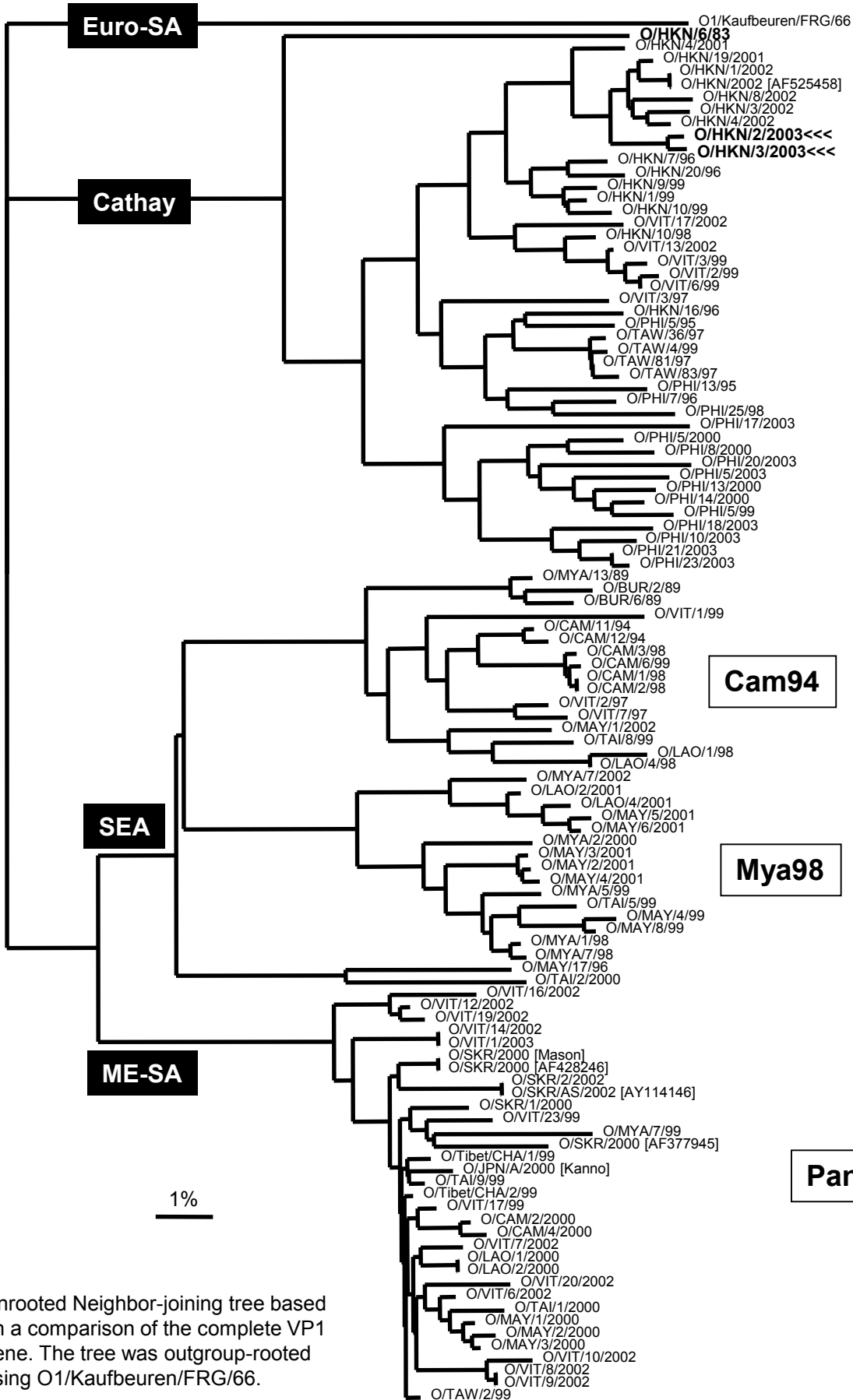
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1	O/HKN/2/2003	HKN03-02	637	633	2	99.37	0.63
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3	O/HKN/4/2002	HKN02-04	578	567	1	98.10	1.90
4	O/HKN/2002 [AF525458]	HKN02-AA	638	623	1	97.65	2.35
5	O/HKN/1/2002	HKN02-01	637	622	2	97.65	2.35
6	O/HKN/3/2002	HKN02-03	636	618	3	97.17	2.83
7	O/HKN/9/2002	HKN02-09	407	395	3	97.05	2.95
8	O/HKN/8/2002	HKN02-08	579	561	4	96.89	3.11
9	O/HKN/4/2001	HKN01-04	637	617	2	96.86	3.14
10	O/HKN/4/99	HKN99-04	476	455	10	95.59	4.41

**Relationships to Reference Virus Strains**

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	516	475	6	92.05	7.95
2	O/HKN/6/83	HKN83-06	636	551	3	86.64	13.36
3	O/IND/53/79	IND79A53	638	520	1	81.50	18.50
4	O/ISR/1/88	ISR88-01	193	157	5	81.35	18.65
5	O/MOR/1/91	MOR91-01	207	168	3	81.16	18.84
6	O/TAW/2/99	TAW99-02	638	513	1	80.41	19.59
7	O1/Manisa/TUR/69	TUR69--E	638	510	1	79.94	20.06
8	O/TAI/189/87*	TAI87--B	527	415	3	78.75	21.25
9	O/IND/R2/75*	IND75--A	638	500	1	78.37	21.63
10	O1/BFS 1860/UK/67	UKG67--A	638	490	1	76.80	23.20

nt, nucleotides

\*, not a WRLFMD reference number



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using O1/Kaufbeuren/FRG/66.