

**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: O	Report date: 11/03/2004						
WRL Ref No: MAY/5/2002	Reported by N.J. Knowles:						
Date collected: 23/10/2002	Validated by J.-F. Valarcher:						
Date received: 19/01/2004	Topotype: SEA						
Species: Cattle	Genotype/strain: Cam94						
Material used: BTy1	Sequence filename: MAY02-05.SEQ						
Region sequenced: VP1	Date sequence last updated: 26/02/2004						
RT-PCR primers: O-1C283F/NK61	Total no. of comparisons: 1368						
No. of Nt determined: 632							
No. of ambiguities: 1							
Gene length: 639							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/MAY/1/2002	MAY02-01	632	622	1	98.42	1.58
2	O/TAI/44-2/02R2B3/2002*	TAI02-AA	632	615	1	97.31	2.69
3	O/MAY/2/2003	MAY03-02	547	526	2	96.16	3.84
4	O/LAO/4/98	LAO98-04	632	604	1	95.57	4.43
5	O/LAO/1/98	LAO98-01	314	299	9	95.22	4.78
6	O/CAM/11/94	CAM94-11	631	598	2	94.77	5.23
7	O/CAM/12/94	CAM94-12	631	596	2	94.45	5.55
8	O/TAI/8/99	TAI99-08	630	594	3	94.29	5.71
9	O/VIT/9/97	VIT97-09	549	517	3	94.17	5.83
10	A/IRN/5/98	IRN98-05	416	389	1	93.51	6.49
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAI/189/87*	TAI87--B	525	469	4	89.33	10.67
2	O/IND/R2/75*	IND75--A	632	549	1	86.87	13.13
3	O/TAW/2/99	TAW99-02	632	545	1	86.23	13.77
4	O1/Manisa/TUR/69	TUR69--E	632	541	1	85.60	14.40
5	O/IND/53/79	IND79A53	632	539	1	85.28	14.72
6	O/ISR/1/88	ISR88-01	186	154	6	82.80	17.20
7	O/MOR/1/91	MOR91-01	200	164	4	82.00	18.00
8	O/HKN/6/83	HKN83-06	630	508	3	80.63	19.37
9	O1/BFS 1860/UK/67	UKG67--A	632	506	1	80.06	19.94
10	O/PHI/5/95	PHI95-05	509	401	7	78.78	21.22
nt, nucleotides							
*, not a WRLFMD reference number							

**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: O	Report date: 11/03/2004						
WRL Ref No: MAY/2/2003	Reported by N.J. Knowles:						
Date collected: 02/07/2003	Validated by J.-F. Valarcher:						
Date received: 19/01/2004	Topotype: SEA						
Species: Cattle	Genotype/strain: Cam94						
Material used: BTy1	Sequence filename: MAY03-02.SEQ						
Region sequenced: VP1	Date sequence last updated: 26/02/2004						
RT-PCR primers: O-1C283F/NK61	Total no. of comparisons: 1368						
No. of Nt determined: 548							
No. of ambiguities: 1							
Gene length: 639							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/MAY/1/2002	MAY02-01	548	530	1	96.72	3.28
2	O/MAY/5/2002	MAY02-05	547	526	2	96.16	3.84
3	O/TAI/44-2/02R2B3/2002*	TAI02-AA	548	526	1	95.99	4.01
4	O/LAO/4/98	LAO98-04	548	518	1	94.53	5.47
5	O/CAM/11/94	CAM94-11	548	517	1	94.34	5.66
6	O/CAM/12/94	CAM94-12	547	513	2	93.78	6.22
7	O/VIT/9/97	VIT97-09	471	441	3	93.63	6.37
8	O/LAO/1/98	LAO98-01	314	293	9	93.31	6.69
9	A/IRN/5/98	IRN98-05	417	389	0	93.29	6.71
10	O/VIT/1/97	VIT97-01	526	490	7	93.16	6.84
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAI/189/87*	TAI87--B	519	459	4	88.44	11.56
2	O/IND/R2/75*	IND75--A	548	471	1	85.95	14.05
3	O/TAW/2/99	TAW99-02	548	466	1	85.04	14.96
4	O1/Manisa/TUR/69	TUR69--E	548	463	1	84.49	15.51
5	O/IND/53/79	IND79A53	548	460	1	83.94	16.06
6	O1/BFS 1860/UK/67	UKG67--A	548	440	1	80.29	19.71
7	O/ISR/1/88	ISR88-01	180	144	6	80.00	20.00
8	O/MOR/1/91	MOR91-01	195	156	3	80.00	20.00
9	O/HKN/6/83	HKN83-06	546	434	3	79.49	20.51
10	O/PHI/5/95	PHI95-05	503	392	7	77.93	22.07
nt, nucleotides							
*, not a WRLFMD reference number							

**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: O	Report date: 11/03/2004						
WRL Ref No: MAY/6/2003	Reported by N.J. Knowles:						
Date collected: 28/12/2003	Validated by J.-F. Valarcher:						
Date received: 19/01/2004	Topotype: ME-SA						
Species: Cattle	Genotype/strain: PanAsia						
Material used: BTy1	Sequence filename: MAY03-06.SEQ						
Region sequenced: VP1	Date sequence last updated: 26/02/2004						
RT-PCR primers: O-1C283F/NK61	Total no. of comparisons: 1368						
No. of Nt determined: 639							
No. of ambiguities: 0							
Gene length: 639							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/MAY/2/2004	MAY04-02	608	607	0	99.84	0.16
2	O/MAY/3/2004	MAY04-03	606	604	0	99.67	0.33
3	O/MAY/7/2003	MAY03-07	628	625	2	99.52	0.48
4	O/MAY/1/2004	MAY04-01	536	529	1	98.69	1.31
5	O/NEP/2/2003	NEP03-02	638	627	1	98.28	1.72
6	O/NEP/6/2003	NEP03-06	639	626	0	97.97	2.03
7	O/NEP/4/2003	NEP03-04	639	623	0	97.50	2.50
8	O/NEP/5/2003	NEP03-05	639	621	0	97.18	2.82
9	O/LEB/14/98	LEB98-14	614	587	3	95.60	4.40
10	O/VIT/2/2002	VIT02-02	488	466	4	95.49	4.51
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99	TAW99-02	639	606	0	94.84	5.16
2	O/IND/53/79	IND79A53	639	571	0	89.36	10.64
3	O/IND/R2/75*	IND75--A	639	570	0	89.20	10.80
4	O1/Manisa/TUR/69	TUR69--E	639	564	0	88.26	11.74
5	O/ISR/1/88	ISR88-01	193	166	5	86.01	13.99
6	O/MOR/1/91	MOR91-01	207	178	3	85.99	14.01
7	O/TAI/189/87*	TAI87--B	527	453	3	85.96	14.04
8	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
9	O/PHI/5/95	PHI95-05	516	413	6	80.04	19.96
10	O1/BFS 1860/UK/67	UKG67--A	639	506	0	79.19	20.81
nt, nucleotides							
*, not a WRLFMD reference number							

**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: O	Report date:	11/03/2004					
WRL Ref No: MAY/7/2003	Reported by N.J. Knowles:						
Date collected: 29/12/2003	Validated by J.-F. Valarcher:						
Date received: 19/01/2004	Topotype: ME-SA						
Species: Cattle	Genotype/strain: PanAsia						
Material used: BTy1	Sequence filename: MAY03-07.SEQ						
Region sequenced: VP1	Date sequence last updated: 26/02/2004						
RT-PCR primers: O-1C244F/NK61	Total no. of comparisons: 1368						
No. of Nt determined: 628							
No. of ambiguities: 2							
Gene length: 639							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/MAY/2/2004	MAY04-02	598	596	1	99.67	0.33
2	O/MAY/6/2003	MAY03-06	628	625	2	99.52	0.48
3	O/MAY/3/2004	MAY04-03	596	593	1	99.50	0.50
4	O/MAY/1/2004	MAY04-01	536	528	1	98.51	1.49
5	O/NEP/2/2003	NEP03-02	627	617	3	98.41	1.59
6	O/NEP/6/2003	NEP03-06	628	614	2	97.77	2.23
7	O/NEP/4/2003	NEP03-04	628	612	2	97.45	2.55
8	O/NEP/5/2003	NEP03-05	628	611	2	97.29	2.71
9	O/LEB/14/98	LEB98-14	603	575	5	95.36	4.64
10	O/VIT/2/2002	VIT02-02	487	464	5	95.28	4.72
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99	TAW99-02	628	594	2	94.59	5.41
2	O/IND/53/79	IND79A53	628	560	2	89.17	10.83
3	O/IND/R2/75*	IND75--A	628	558	2	88.85	11.15
4	O1/Manisa/TUR/69	TUR69--E	628	553	2	88.06	11.94
5	O/ISR/1/88	ISR88-01	192	165	6	85.94	14.06
6	O/TAI/189/87*	TAI87--B	526	451	4	85.74	14.26
7	O/MOR/1/91	MOR91-01	206	176	4	85.44	14.56
8	O/PHI/5/95	PHI95-05	515	414	7	80.39	19.61
9	O/HKN/6/83	HKN83-06	626	500	4	79.87	20.13
10	O1/BFS 1860/UK/67	UKG67--A	628	497	2	79.14	20.86
nt, nucleotides							
*, not a WRLFMD reference number							

**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: O	Report date: 11/03/2004
WRL Ref No: MAY/1/2004	Reported by N.J. Knowles:
Date collected: 05/01/2004	Validated by J.-F. Valarcher:
Date received: 19/01/2004	Topotype: ME-SA
Species: Cattle	Genotype/strain: PanAsia
Material used: BTy1	Sequence filename: MAY04-01.SEQ
Region sequenced: VP1	Date sequence last updated: 26/02/2004
RT-PCR primers: O-1C244F/NK61	Total no. of comparisons: 1368
No. of Nt determined: 535	
No. of ambiguities: 2	
Gene length: 639	

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/MAY/3/2004	MAY04-03	535	531	1	99.25	0.75
2	O/MAY/2/2004	MAY04-02	535	530	1	99.07	0.93
3	O/MAY/6/2003	MAY03-06	535	529	1	98.88	1.12
4	O/MAY/7/2003	MAY03-07	535	528	1	98.69	1.31
5	O/NEP/2/2003	NEP03-02	534	523	2	97.94	2.06
6	O/NEP/6/2003	NEP03-06	535	523	1	97.76	2.24
7	O/NEP/4/2003	NEP03-04	535	520	1	97.20	2.80
8	O/NEP/5/2003	NEP03-05	535	517	1	96.64	3.36
9	O/VIT/2/2002	VIT02-02	436	415	5	95.18	4.82
10	O/IRN/12/98	IRN98-12	366	348	27	95.08	4.92

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99	TAW99-02	535	505	1	94.39	5.61
2	O/IND/53/79	IND79A53	535	480	1	89.72	10.28
3	O1/Manisa/TUR/69	TUR69--E	535	473	1	88.41	11.59
4	O/IND/R2/75*	IND75--A	535	469	1	87.66	12.34
5	O/TAI/189/87*	TAI87--B	459	395	3	86.06	13.94
6	O/MOR/1/91	MOR91-01	136	116	2	85.29	14.71
7	O/ISR/1/88	ISR88-01	120	102	6	85.00	15.00
8	O/PHI/5/95	PHI95-05	443	358	7	80.81	19.19
9	O1/BFS 1860/UK/67	UKG67--A	535	426	1	79.63	20.37
10	O/HKN/6/83	HKN83-06	533	424	3	79.55	20.45

nt, nucleotides

*, not a WRLFMD reference number

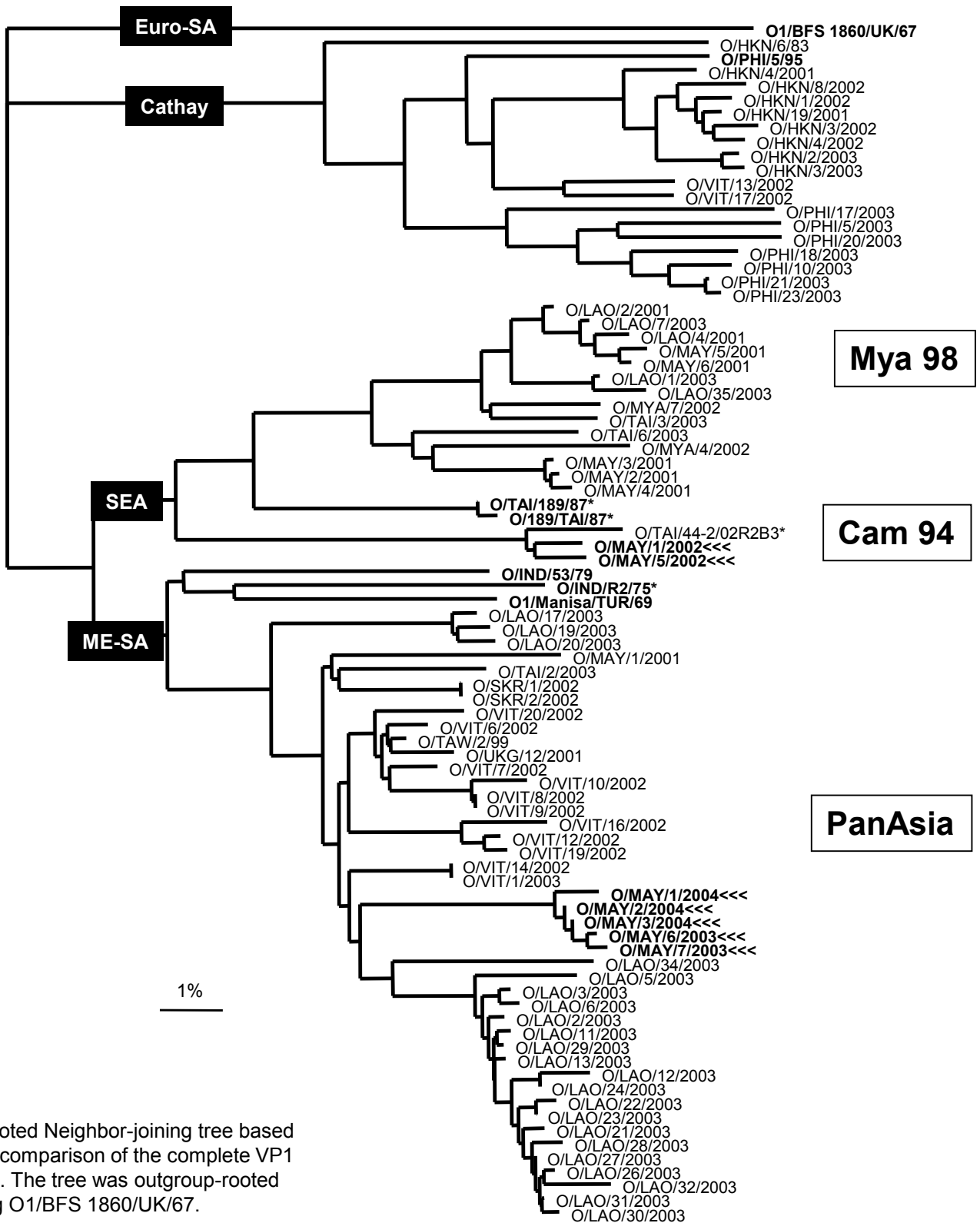
**Report from the Molecular Epidemiology Section of the Dept. of Exotic Disease Control to
the Head of the World Reference Laboratory for FMD (Non-QAU Form)**

Serotype: O	Report date:	11/03/2004					
WRL Ref No: MAY/2/2004	Reported by N.J. Knowles:						
Date collected: 06/01/2004	Validated by J.-F. Valarcher:						
Date received: 19/01/2004	Topotype: ME-SA						
Species: Cattle	Genotype/strain:						
Material used: BTy1	Sequence filename: MAY04-02.SEQ						
Region sequenced: VP1	Date sequence last updated: 26/02/2004						
RT-PCR primers: O-1C244F/NK61; O-1C583F/NK61	Total no. of comparisons: 1368						
No. of Nt determined: 608							
No. of ambiguities: 0							
Gene length: 639							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/MAY/6/2003	MAY03-06	608	607	0	99.84	0.16
2	O/MAY/3/2004	MAY04-03	606	605	0	99.83	0.17
3	O/MAY/7/2003	MAY03-07	598	596	1	99.67	0.33
4	O/NEP/2/2003	NEP03-02	607	601	1	99.01	0.99
5	O/MAY/1/2004	MAY04-01	536	530	1	98.88	1.12
6	O/NEP/6/2003	NEP03-06	608	600	0	98.68	1.32
7	O/NEP/4/2003	NEP03-04	608	597	0	98.19	1.81
8	O/NEP/5/2003	NEP03-05	608	595	0	97.86	2.14
9	O/IND/209/99 (1998)	IND98-AU	134	130	0	97.01	2.99
10	O/IND/289/97	IND97-AW	134	130	0	97.01	2.99
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99	TAW99-02	608	581	0	95.56	4.44
2	O/IND/53/79	IND79A53	608	548	0	90.13	9.87
3	O/IND/R2/75*	IND75--A	608	544	0	89.47	10.53
4	O1/Manisa/TUR/69	TUR69--E	608	541	0	88.98	11.02
5	O/MOR/1/91	MOR91-01	177	154	2	87.01	12.99
6	O/TAI/189/87*	TAI87--B	502	434	2	86.45	13.55
7	O/ISR/1/88	ISR88-01	162	140	5	86.42	13.58
8	O/PHI/5/95	PHI95-05	485	393	6	81.03	18.97
9	O/HKN/6/83	HKN83-06	606	489	2	80.69	19.31
10	O1/BFS 1860/UK/67	UKG67--A	608	486	0	79.93	20.07
nt, nucleotides							
*, not a WRLFMD reference number							

**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: O	Report date: 11/03/2004						
WRL Ref No: MAY/3/2004	Reported by N.J. Knowles:						
Date collected: 08/01/2004	Validated by J.-F. Valarcher:						
Date received: 19/01/2004	Topotype: ME-SA						
Species: Cattle	Genotype/strain: PanAsia						
Material used: BTy1	Sequence filename: MAY04-03.SEQ						
Region sequenced: VP1	Date sequence last updated: 26/02/2004						
RT-PCR primers: O-1C244F/NK61	Total no. of comparisons: 1368						
No. of Nt determined: 606							
No. of ambiguities: 0							
Gene length: 639							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/MAY/2/2004	MAY04-02	606	605	0	99.83	0.17
2	O/MAY/6/2003	MAY03-06	606	604	0	99.67	0.33
3	O/MAY/7/2003	MAY03-07	596	593	1	99.50	0.50
4	O/MAY/1/2004	MAY04-01	536	531	1	99.07	0.93
5	O/NEP/2/2003	NEP03-02	605	598	1	98.84	1.16
6	O/NEP/6/2003	NEP03-06	606	597	0	98.51	1.49
7	O/NEP/4/2003	NEP03-04	606	594	0	98.02	1.98
8	O/NEP/5/2003	NEP03-05	606	592	0	97.69	2.31
9	O/IND/209/99 (1998)	IND98-AU	132	128	0	96.97	3.03
10	O/IND/289/97	IND97-AW	132	128	0	96.97	3.03
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99	TAW99-02	606	578	0	95.38	4.62
2	O/IND/53/79	IND79A53	606	545	0	89.93	10.07
3	O/IND/R2/75*	IND75--A	606	541	0	89.27	10.73
4	O1/Manisa/TUR/69	TUR69--E	606	538	0	88.78	11.22
5	O/MOR/1/91	MOR91-01	175	151	2	86.29	13.71
6	O/TAI/189/87*	TAI87--B	500	431	2	86.20	13.80
7	O/ISR/1/88	ISR88-01	160	137	5	85.63	14.38
8	O/PHI/5/95	PHI95-05	483	390	6	80.75	19.25
9	O/HKN/6/83	HKN83-06	604	486	2	80.46	19.54
10	O1/BFS 1860/UK/67	UKG67--A	606	483	0	79.70	20.30
nt, nucleotides							
*, not a WRLFMD reference number							

Report on: O MALAYSIA 2002-2004



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using O1/BFS 1860/UK/67.

* not a WRLFMD ref. no.