

Report from the Molecular Epidemiology Section of the Experimental Epidemiology Group to the Head of the World Reference Laboratory for FMD (Non-QAU Form)

Serotype: O	Date: 08/06/2003
Virus isolate: UGA/3/2002	Reported by: N.J. Knowles
Material used: PK1 RS2	Signed (file copy only):
Region sequenced: VP1	Seq. filename: UGA02-03
RT-PCR primer set: ARS4/NK61	
Topotype: EA-2	No. of ambiguities: 1
Genotype/strain:	Date seq. last updated: 03/04/2003
No. of nt determined / no. in gene: 638 / 639	Total no. of comparisons made: 1304

Comments: This virus is a representative of a newly recognised topotype – East Africa 2 (EA-2). It appears that members of this topotype have, in the past, recombined with viruses of the Middle East-South Asia (ME-SA) topotype with a cross-over point somewhere in the 3' half of the VP1 gene. This makes it difficult, if not impossible, to distinguish the two topotypes when only sequences at the 3' end of VP1 are compared, e.g. the viruses shown below in italics (IND & SAU) are probably members of the ME-SA topotype.

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	UG 5/02/O* (Onderstepoort)	UGA02-AA	488	488	2	100.00	0.00
2	UG 11/02/O* (Onderstepoort)	UGA02-AB	494	494	1	100.00	0.00
3	O/UGA/6/2002	UGA02-06	609	602	0	98.85	1.15
4	O/UGA/5/2002	UGA02-05	587	554	4	94.38	5.62
5	<i>O/IND/146/99*</i>	<i>IND99-AC</i>	<i>155</i>	<i>146</i>	<i>10</i>	<i>94.19</i>	<i>5.81</i>
6	O/KEN/3/2002	KEN02-03	636	593	3	93.24	6.76
7	O/KEN/18/98	KEN98-18	384	358	17	93.23	6.77
8	O/KEN/5/2002	KEN02-05	638	593	1	92.95	7.05
9	<i>O/SAU/76/94</i>	<i>SAU94-76</i>	<i>152</i>	<i>141</i>	<i>1</i>	<i>92.76</i>	<i>7.24</i>
10	O/KEN/7/2002	KEN02-07	638	589	1	92.32	7.68

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	638	546	1	85.58	14.42
2	O/IND/53/79	IND79A53	638	545	1	85.42	14.58
3	O/MOR/1/91	MOR91-01	207	176	3	85.02	14.98
4	O/ISR/1/88	ISR88-01	192	163	6	84.90	15.10
5	O/IND/R2/75*	IND75--A	638	540	1	84.64	15.36
6	O1/Manisa/TUR/69	TUR69--E	638	536	1	84.01	15.99
7	O/TAI/189/87*	TAI87--B	526	428	4	81.37	18.63
8	O1/BFS 1860/UK/67	UKG67--A	638	515	1	80.72	19.28
9	O/HKN/6/83	HKN83-06	636	511	3	80.35	19.65
10	O/PHI/5/95	PHI95-05	515	407	7	79.03	20.97

nt, nucleotides

*, not a WRLFMD reference number

cc. Head of Experimental Epidemiology Group

cc. Head of Vesicular Diseases Group