

Serotype: O  
WRL Ref No: BHU/11/2007  
Sender Ref: 4  
Date collected: 25/07/2007  
Date received by WRLFMD: 09/10/2007  
Date received for sequencing: 24/10/2007  
Species: Cattle  
Material used: BTy2  
Region sequenced: VP1  
RT-PCR primers: O-1C244F/EUR-2B52R;  
O-1C272F/EUR-2B52R  
No. of Nt determined: 639  
No. of ambiguities: 0  
Gene length: 639

Report date: 22/11/2007  
Topotype: ME-SA  
Genotype/strain: PanAsia  
Sequence filename: BHU07-11.SEQ  
Date sequence last updated: 05/11/2007  
Total no. of comparisons: 1695  
Min. no. of nt for comparison: 300  
Total turn-around time: 44 days  
Sequencing time: 29 days

Comments:

### Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/BHU/18/2007	BHU07-18	639	639	0	100	0
2	O/BHU/12/2007	BHU07-12	639	638	0	99.84	0.16
3	O/BHU/49/2003 (DQ164867)	BHU03-49	639	623	0	97.5	2.5
4	O/BHU/48/2003	BHU03-48	638	621	1	97.34	2.66
5	O/BHU/47/2003 (DQ165042)	BHU03-47	637	619	2	97.17	2.83
6	O/NEP/6/2003 (DQ165061)	NEP03-06	639	620	0	97.03	2.97
7	O/NEP/2/2003	NEP03-02	638	619	1	97.02	2.98
8	O/BHU/30/2004 (DQ165045)	BHU04-30	639	619	0	96.87	3.13
9	O/BHU/31/2004 (DQ164869)	BHU04-31	639	619	0	96.87	3.13
10	O/BHU/33/2004 (DQ165046)	BHU04-33	639	619	0	96.87	3.13

### 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	604	0	94.52	5.48
2	O/IND/R2/75* [AF204276]	IND75--A	639	570	0	89.2	10.8
3	O/IND/53/79 [AF292107]	IND79A53	639	567	0	88.73	11.27
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	560	0	87.64	12.36
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	555	0	86.85	13.15
7	O/MOR/1/91	MOR91-01	639	551	0	86.23	13.77
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	521	0	81.53	18.47
9	O/HKN/6/83	HKN83-06	637	514	2	80.69	19.31
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	506	0	79.19	20.81

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O	Report date: 22/11/2007
WRL Ref No: BHU/12/2007	
Sender Ref: 5	
Date collected: 25/07/2007	
Date received by WRLFMD: 09/10/2007	Topotype: ME-SA
Date received for sequencing: 24/10/2007	Genotype/strain: PanAsia
Species: Cattle	Sequence filename: BHU07-12.SEQ
Material used: BTy1	Date sequence last updated: 05/11/2007
Region sequenced: VP1	Total no. of comparisons: 1695
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 44 days
No. of ambiguities: 0	Sequencing time: 29 days
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/BHU/11/2007	BHU07-11	639	638	0	99.84	0.16
2	O/BHU/18/2007	BHU07-18	639	638	0	99.84	0.16
3	O/BHU/49/2003 (DQ164867)	BHU03-49	639	622	0	97.34	2.66
4	O/BHU/48/2003	BHU03-48	638	620	1	97.18	2.82
5	O/BHU/47/2003 (DQ165042)	BHU03-47	637	618	2	97.02	2.98
6	O/NEP/2/2003	NEP03-02	638	618	1	96.87	3.13
7	O/NEP/6/2003 (DQ165061)	NEP03-06	639	619	0	96.87	3.13
8	O/BHU/30/2004 (DQ165045)	BHU04-30	639	618	0	96.71	3.29
9	O/BHU/31/2004 (DQ164869)	BHU04-31	639	618	0	96.71	3.29
10	O/BHU/33/2004 (DQ165046)	BHU04-33	639	618	0	96.71	3.29

### 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	603	0	94.37	5.63
2	O/IND/R2/75* [AF204276]	IND75--A	639	569	0	89.05	10.95
3	O/IND/53/79 [AF292107]	IND79A53	639	566	0	88.58	11.42
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	563	0	88.11	11.89
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	559	0	87.48	12.52
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	554	0	86.7	13.3
7	O/MOR/1/91	MOR91-01	639	550	0	86.07	13.93
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	520	0	81.38	18.62
9	O/HKN/6/83	HKN83-06	637	513	2	80.53	19.47
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	507	0	79.34	20.66

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O	Report date: 22/11/2007
WRL Ref No: BHU/18/2007	
Sender Ref: 10	
Date collected: 10/08/2007	
Date received by WRLFMD: 09/10/2007	Topotype: ME-SA
Date received for sequencing: 24/10/2007	Genotype/strain: PanAsia
Species: Cattle	Sequence filename: BHU07-18.SEQ
Material used: BTy2	Date sequence last updated: 05/11/2007
Region sequenced: VP1	Total no. of comparisons: 1695
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 44 days
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4	O/BHU/48/2003	BHU03-48	638	621	1	97.34	2.66
5	O/BHU/47/2003 (DQ165042)	BHU03-47	637	619	2	97.17	2.83
6	O/NEP/6/2003 (DQ165061)	NEP03-06	639	620	0	97.03	2.97
7	O/NEP/2/2003	NEP03-02	638	619	1	97.02	2.98
8	O/BHU/30/2004 (DQ165045)	BHU04-30	639	619	0	96.87	3.13
9	O/BHU/31/2004 (DQ164869)	BHU04-31	639	619	0	96.87	3.13
10	O/BHU/33/2004 (DQ165046)	BHU04-33	639	619	0	96.87	3.13

#### Relationships to Reference Virus Strains

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2	O/IND/R2/75* [AF204276]	IND75--A	639	570	0	89.2	10.8
3	O/IND/53/79 [AF292107]	IND79A53	639	567	0	88.73	11.27
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	560	0	87.64	12.36
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	555	0	86.85	13.15
7	O/MOR/1/91	MOR91-01	639	551	0	86.23	13.77
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	521	0	81.53	18.47
9	O/HKN/6/83	HKN83-06	637	514	2	80.69	19.31
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	506	0	79.19	20.81

nt, nucleotides

\*, not a WRLFMD reference number

# Report on FMD type O viruses from Bhutan in 2007

No. of Taxa : 187  
 Data File : n:\levd\meg\db\fmvd\o\IRN2007d.meg  
 Data Title : Iran & Bhutan 2007  
 Data Type : Nucleotide (Coding)  
 Analysis : Phylogeny reconstruction  
 Tree Inference : =====  
 Method : Neighbor-Joining  
 Phylogeny Test and options : Bootstrap (1000 replicates; seed=64238)  
 Include Sites : =====  
 Gaps/Missing Data : Pairwise Deletion  
 Codon Positions : 1st+2nd+3rd+Noncoding  
 Substitution Model : =====  
 Model : Nucleotide: Kimura 2-parameter  
 Substitutions to Include : d: Transitions + Transversions  
 Pattern among Lineages : Same (Homogeneous)  
 Rates among sites : Uniform rates  
 No. of Sites : 639  
 No Of Bootstrap Reps = 1000  
 Only bootstrap values of 70% and above are shown  
 \*, not a WRLFMD Ref. No.

N.J. Knowles & J. Wadsworth, 26 November 2007

