

Serotype: O  
 WRL Ref No: AFG/29/2007  
 Sender Ref: 29  
 Date collected: 2007  
 Date received by WRLFMD: 01/06/2007  
 Date received for sequencing: 21/06/2007  
 Species: Goat  
 Material used: BTy1  
 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: 27/06/2007  
 Topotype: ME-SA  
 Genotype/strain: PanAsia  
 Sequence filename: AFG07-29.SEQ  
 Date sequence last updated: 26/06/2007  
 Total no. of comparisons: 1592  
 Min. no. of nt for comparison: 300  
 Total turn-around time: 26 days  
 Sequencing time: 6 days

Comments:

### Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/AFG/45/2007	AFG07-45	639	637	0	99.69	0.31
2	O/AFG/42/2007	AFG07-42	639	636	0	99.53	0.47
3	O/AFG/43/2007	AFG07-43	639	636	0	99.53	0.47
4	O/PAK/10/2006	PAK06-10	639	629	0	98.44	1.56
5	O/PAK/16/2006	PAK06-16	639	629	0	98.44	1.56
6	O/PAK/4/2006	PAK06-04	639	629	0	98.44	1.56
7	O/PAK/6/2006	PAK06-06	639	629	0	98.44	1.56
8	O/PAK/8/2006	PAK06-08	639	629	0	98.44	1.56
9	O/PAK/9/2006	PAK06-09	639	629	0	98.44	1.56
10	O/IRN/12/2006	IRN06-12	639	627	0	98.12	1.88

### 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/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/IND/R2/75* [AF204276]	IND75--A	639	562	0	87.95	12.05
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	560	0	87.64	12.36
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	554	0	86.7	13.3
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	553	0	86.54	13.46
7	O/MOR/1/91	MOR91-01	639	551	0	86.23	13.77
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	518	0	81.06	18.94
9	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67	UKG67--A	639	513	0	80.28	19.72

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O  
WRL Ref No: AFG/34/2007  
Sender Ref: 34  
Date collected: 2007  
Date received by WRLFMD: 01/06/2007  
Date received for sequencing: 21/06/2007  
Species: Cattle  
Material used: BTy1  
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: 27/06/2007  
Topotype: ME-SA  
Genotype/strain: PanAsia  
Sequence filename: AFG07-34.SEQ  
Date sequence last updated: 26/06/2007  
Total no. of comparisons: 1592  
Min. no. of nt for comparison: 300  
Total turn-around time: 26 days  
Sequencing time: 6 days

Comments:

### Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/AFG/36/2007	AFG07-36	639	637	0	99.69	0.31
2	O/AFG/37/2007	AFG07-37	639	637	0	99.69	0.31
3	O/AFG/39/2007	AFG07-39	639	637	0	99.69	0.31
4	O/PAK/10/2006	PAK06-10	639	629	0	98.44	1.56
5	O/PAK/11/2006	PAK06-11	639	629	0	98.44	1.56
6	O/PAK/12/2006	PAK06-12	639	629	0	98.44	1.56
7	O/PAK/14/2006	PAK06-14	639	629	0	98.44	1.56
8	O/PAK/15/2006	PAK06-15	639	629	0	98.44	1.56
9	O/PAK/16/2006	PAK06-16	639	629	0	98.44	1.56
10	O/PAK/4/2006	PAK06-04	639	629	0	98.44	1.56

### 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	601	0	94.05	5.95
2	O/IND/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/IND/R2/75* [AF204276]	IND75--A	639	567	0	88.73	11.27
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	561	0	87.79	12.21
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	560	0	87.64	12.36
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	522	0	81.69	18.31
9	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O  
 WRL Ref No: AFG/36/2007  
 Sender Ref: 36  
 Date collected: 2007  
 Date received by WRLFMD: 01/06/2007  
 Date received for sequencing: 21/06/2007  
 Species: Cattle  
 Material used: BTy1  
 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: 27/06/2007  
 Topotype: ME-SA  
 Genotype/strain: PanAsia  
 Sequence filename: AFG07-36.SEQ  
 Date sequence last updated: 26/06/2007  
 Total no. of comparisons: 1592  
 Min. no. of nt for comparison: 300  
 Total turn-around time: 26 days  
 Sequencing time: 6 days

Comments:

### Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/AFG/37/2007	AFG07-37	639	639	0	100	0
2	O/AFG/39/2007	AFG07-39	639	639	0	100	0
3	O/AFG/34/2007	AFG07-34	639	637	0	99.69	0.31
4	O/PAK/10/2006	PAK06-10	639	631	0	98.75	1.25
5	O/PAK/16/2006	PAK06-16	639	631	0	98.75	1.25
6	O/PAK/4/2006	PAK06-04	639	631	0	98.75	1.25
7	O/PAK/6/2006	PAK06-06	639	631	0	98.75	1.25
8	O/PAK/8/2006	PAK06-08	639	631	0	98.75	1.25
9	O/PAK/9/2006	PAK06-09	639	631	0	98.75	1.25
10	O/IRN/12/2006	IRN06-12	639	629	0	98.44	1.56

### 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/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/IND/R2/75* [AF204276]	IND75--A	639	567	0	88.73	11.27
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	561	0	87.79	12.21
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	560	0	87.64	12.36
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	522	0	81.69	18.31
9	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O  
WRL Ref No: AFG/37/2007  
Sender Ref: 37  
Date collected: 2007  
Date received by WRLFMD: 01/06/2007  
Date received for sequencing: 21/06/2007  
Species: Cattle  
Material used: BTy1  
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: 27/06/2007  
Topotype: ME-SA  
Genotype/strain: PanAsia  
Sequence filename: AFG07-37.SEQ  
Date sequence last updated: 26/06/2007  
Total no. of comparisons: 1592  
Min. no. of nt for comparison: 300  
Total turn-around time: 26 days  
Sequencing time: 6 days

Comments:

### Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/AFG/36/2007	AFG07-36	639	639	0	100	0
2	O/AFG/39/2007	AFG07-39	639	639	0	100	0
3	O/AFG/34/2007	AFG07-34	639	637	0	99.69	0.31
4	O/PAK/10/2006	PAK06-10	639	631	0	98.75	1.25
5	O/PAK/16/2006	PAK06-16	639	631	0	98.75	1.25
6	O/PAK/4/2006	PAK06-04	639	631	0	98.75	1.25
7	O/PAK/6/2006	PAK06-06	639	631	0	98.75	1.25
8	O/PAK/8/2006	PAK06-08	639	631	0	98.75	1.25
9	O/PAK/9/2006	PAK06-09	639	631	0	98.75	1.25
10	O/IRN/12/2006	IRN06-12	639	629	0	98.44	1.56

### 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/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/IND/R2/75* [AF204276]	IND75--A	639	567	0	88.73	11.27
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	561	0	87.79	12.21
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	560	0	87.64	12.36
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	522	0	81.69	18.31
9	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O	Report date: 27/06/2007						
WRL Ref No: AFG/39/2007							
Sender Ref: 39							
Date collected: 2007							
Date received by WRLFMD: 01/06/2007							
Date received for sequencing: 21/06/2007	Topotype: ME-SA						
Species: Not known	Genotype/strain: PanAsia						
Material used: BTy1	Sequence filename: AFG07-39.SEQ						
Region sequenced: VP1	Date sequence last updated: 26/06/2007						
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Total no. of comparisons: 1592						
No. of Nt determined: 639	Min. no. of nt for comparison: 300						
No. of ambiguities: 0	Total turn-around time: 26 days						
Gene length: 639	Sequencing time: 6 days						
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/AFG/36/2007	AFG07-36	639	639	0	100	0
2	O/AFG/37/2007	AFG07-37	639	639	0	100	0
3	O/AFG/34/2007	AFG07-34	639	637	0	99.69	0.31
4	O/PAK/10/2006	PAK06-10	639	631	0	98.75	1.25
5	O/PAK/16/2006	PAK06-16	639	631	0	98.75	1.25
6	O/PAK/4/2006	PAK06-04	639	631	0	98.75	1.25
7	O/PAK/6/2006	PAK06-06	639	631	0	98.75	1.25
8	O/PAK/8/2006	PAK06-08	639	631	0	98.75	1.25
9	O/PAK/9/2006	PAK06-09	639	631	0	98.75	1.25
10	O/IRN/12/2006	IRN06-12	639	629	0	98.44	1.56
<b>Relationships to Reference Virus Strains</b>							
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/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/IND/R2/75* [AF204276]	IND75--A	639	567	0	88.73	11.27
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	561	0	87.79	12.21
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	560	0	87.64	12.36
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	522	0	81.69	18.31
9	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67	UKG67--A	639	510	0	79.81	20.19
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: O	Report date: 27/06/2007
WRL Ref No: AFG/42/2007	
Sender Ref: 42	
Date collected: 2007	
Date received by WRLFMD: 01/06/2007	Topotype: ME-SA
Date received for sequencing: 21/06/2007	Genotype/strain: PanAsia
Species: Not known	Sequence filename: AFG07-42.SEQ
Material used: RS1	Date sequence last updated: 26/06/2007
Region sequenced: VP1	Total no. of comparisons: 1592
RT-PCR primers: O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 26 days
No. of ambiguities: 0	Sequencing time: 6 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/AFG/43/2007	AFG07-43	639	639	0	100	0
2	O/AFG/29/2007	AFG07-29	639	636	0	99.53	0.47
3	O/AFG/45/2007	AFG07-45	639	636	0	99.53	0.47
4	O/PAK/10/2006	PAK06-10	639	630	0	98.59	1.41
5	O/PAK/16/2006	PAK06-16	639	630	0	98.59	1.41
6	O/PAK/4/2006	PAK06-04	639	630	0	98.59	1.41
7	O/PAK/6/2006	PAK06-06	639	630	0	98.59	1.41
8	O/PAK/8/2006	PAK06-08	639	630	0	98.59	1.41
9	O/PAK/9/2006	PAK06-09	639	630	0	98.59	1.41
10	O/IRN/12/2006	IRN06-12	639	628	0	98.28	1.72

### 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	639	604	0	94.52	5.48
2	O/IND/53/79 [AF292107]	IND79A53	639	570	0	89.2	10.8
3	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	561	0	87.79	12.21
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	554	0	86.7	13.3
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	554	0	86.7	13.3
7	O/MOR/1/91	MOR91-01	639	552	0	86.38	13.62
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	518	0	81.06	18.94
9	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67	UKG67--A	639	512	0	80.13	19.87

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O  
 WRL Ref No: AFG/43/2007  
 Sender Ref: 43  
 Date collected: 2007  
 Date received by WRLFMD: 01/06/2007  
 Date received for sequencing: 21/06/2007  
 Species: Not known  
 Material used: BTy1  
 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: 27/06/2007  
 Topotype: ME-SA  
 Genotype/strain: PanAsia  
 Sequence filename: AFG07-43.SEQ  
 Date sequence last updated: 26/06/2007  
 Total no. of comparisons: 1592  
 Min. no. of nt for comparison: 300  
 Total turn-around time: 26 days  
 Sequencing time: 6 days

Comments:

### Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/AFG/42/2007	AFG07-42	639	639	0	100	0
2	O/AFG/29/2007	AFG07-29	639	636	0	99.53	0.47
3	O/AFG/45/2007	AFG07-45	639	636	0	99.53	0.47
4	O/PAK/10/2006	PAK06-10	639	630	0	98.59	1.41
5	O/PAK/16/2006	PAK06-16	639	630	0	98.59	1.41
6	O/PAK/4/2006	PAK06-04	639	630	0	98.59	1.41
7	O/PAK/6/2006	PAK06-06	639	630	0	98.59	1.41
8	O/PAK/8/2006	PAK06-08	639	630	0	98.59	1.41
9	O/PAK/9/2006	PAK06-09	639	630	0	98.59	1.41
10	O/IRN/12/2006	IRN06-12	639	628	0	98.28	1.72

### 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	639	604	0	94.52	5.48
2	O/IND/53/79 [AF292107]	IND79A53	639	570	0	89.2	10.8
3	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	561	0	87.79	12.21
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	554	0	86.7	13.3
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	554	0	86.7	13.3
7	O/MOR/1/91	MOR91-01	639	552	0	86.38	13.62
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	518	0	81.06	18.94
9	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67	UKG67--A	639	512	0	80.13	19.87

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: O  
WRL Ref No: AFG/45/2007  
Sender Ref: 45  
Date collected: 2007  
Date received by WRLFMD: 01/06/2007  
Date received for sequencing: 21/06/2007  
Species: Not known  
Material used: BTy1  
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: 27/06/2007  
Topotype: ME-SA  
Genotype/strain: PanAsia  
Sequence filename: AFG07-45.SEQ  
Date sequence last updated: 26/06/2007  
Total no. of comparisons: 1592  
Min. no. of nt for comparison: 300  
Total turn-around time: 26 days  
Sequencing time: 6 days

Comments:

### Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/AFG/29/2007	AFG07-29	639	637	0	99.69	0.31
2	O/AFG/42/2007	AFG07-42	639	636	0	99.53	0.47
3	O/AFG/43/2007	AFG07-43	639	636	0	99.53	0.47
4	O/PAK/10/2006	PAK06-10	639	629	0	98.44	1.56
5	O/PAK/16/2006	PAK06-16	639	629	0	98.44	1.56
6	O/PAK/4/2006	PAK06-04	639	629	0	98.44	1.56
7	O/PAK/6/2006	PAK06-06	639	629	0	98.44	1.56
8	O/PAK/8/2006	PAK06-08	639	629	0	98.44	1.56
9	O/PAK/9/2006	PAK06-09	639	629	0	98.44	1.56
10	O/IRN/12/2006	IRN06-12	639	627	0	98.12	1.88

### 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/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/IND/R2/75* [AF204276]	IND75--A	639	562	0	87.95	12.05
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	554	0	86.7	13.3
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	553	0	86.54	13.46
7	O/MOR/1/91	MOR91-01	639	551	0	86.23	13.77
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	518	0	81.06	18.94
9	O/HKN/6/83	HKN83-06	637	514	2	80.69	19.31
10	O1/BFS 1860/UK/67	UKG67--A	639	513	0	80.28	19.72

nt, nucleotides

\*, not a WRLFMD reference number



# Report on FMDV O from Afghanistan in 2007

Software: MEGA 3.1  
 No. of Taxa : 180  
 Data File : n:\evd\meg\db\fmdv\o\AFG2007a.meg  
 Data Title : O/AFG/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

N.J. Knowles & J. Wadsworth, 27 June 2007

