

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/31/2005	
Sender Ref: 21 106H	
Date collected: Jan 2005	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK05-31.SEQ
Material used: BTy1	Date sequence last updated: 20/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/32/2005	PAK05-32	639	639	0	100	0
2	O/PAK/34/2005	PAK05-34	639	639	0	100	0
3	O/PAK/60/2007	PAK07-60	639	639	0	100	0
4	O/PAK/61/2007	PAK07-61	639	639	0	100	0
5	O/PAK/66/2006	PAK06-66	639	639	0	100	0
6	O/PAK/67/2006	PAK06-67	639	639	0	100	0
7	O/PAK/70/2006	PAK06-70	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/32/2005	
Sender Ref: 22 101H	
Date collected: Jan 2005	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK05-32.SEQ
Material used: BTy1	Date sequence last updated: 20/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/34/2005	PAK05-34	639	639	0	100	0
3	O/PAK/60/2007	PAK07-60	639	639	0	100	0
4	O/PAK/61/2007	PAK07-61	639	639	0	100	0
5	O/PAK/66/2006	PAK06-66	639	639	0	100	0
6	O/PAK/67/2006	PAK06-67	639	639	0	100	0
7	O/PAK/70/2006	PAK06-70	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/33/2005	
Sender Ref: 27 24A	
Date collected: Jan 2005	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK05-33.SEQ
Material used: BTy1	Date sequence last updated: 20/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/71/2006	PAK06-71	639	639	0	100	0
2	O/IRN/22/2007	IRN07-22	639	638	0	99.84	0.16
3	O/PAK/15/2007	PAK07-15	639	638	0	99.84	0.16
4	O/PAK/21/2007	PAK07-21	639	638	0	99.84	0.16
5	O/PAK/35/2005	PAK05-35	639	638	0	99.84	0.16
6	O/PAK/56/2007	PAK07-56	639	638	0	99.84	0.16
7	O/PAK/60/2006	PAK06-60	639	638	0	99.84	0.16
8	O/PAK/63/2006	PAK06-63	639	638	0	99.84	0.16
9	O/PAK/73/2006	PAK06-73	639	638	0	99.84	0.16
10	O/PAK/71/2007	PAK07-07	635	631	4	99.37	0.63

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 (AJ294927)	TAW99-02	639	599	0	93.74	6.26
2	O/IND/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	565	0	88.42	11.58
4	O/TAI/189/87* [TRRL]	TAI87-AC	639	563	0	88.11	11.89
5	O/IND/R2/75* [AF204276]	IND75--A	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	552	0	86.38	13.62
7	O/MOR/1/91	MOR91-01	639	550	0	86.07	13.93
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	527	0	82.47	17.53
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	518	2	81.32	18.68
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	509	0	79.66	20.34

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/34/2005	
Sender Ref: 28 122A	
Date collected: Jan 2005	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK05-34.SEQ
Material used: BTy1	Date sequence last updated: 20/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/32/2005	PAK05-32	639	639	0	100	0
3	O/PAK/60/2007	PAK07-60	639	639	0	100	0
4	O/PAK/61/2007	PAK07-61	639	639	0	100	0
5	O/PAK/66/2006	PAK06-66	639	639	0	100	0
6	O/PAK/67/2006	PAK06-67	639	639	0	100	0
7	O/PAK/70/2006	PAK06-70	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/35/2005	
Sender Ref: 35 145L	
Date collected: Jan 2005	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Water buffalo	Sequence filename: PAK05-35.SEQ
Material used: BTyl	Date sequence last updated: 20/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/IRN/22/2007	IRN07-22	639	639	0	100	0
2	O/PAK/15/2007	PAK07-15	639	639	0	100	0
3	O/PAK/21/2007	PAK07-21	639	639	0	100	0
4	O/PAK/56/2007	PAK07-56	639	639	0	100	0
5	O/PAK/60/2006	PAK06-60	639	639	0	100	0
6	O/PAK/63/2006	PAK06-63	639	639	0	100	0
7	O/PAK/73/2006	PAK06-73	639	639	0	100	0
8	O/PAK/33/2005	PAK05-33	639	638	0	99.84	0.16
9	O/PAK/71/2006	PAK06-71	639	638	0	99.84	0.16
10	O/PAK/7/2007	PAK07-07	635	632	4	99.53	0.47

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 (AJ294927)	TAW99-02	639	600	0	93.9	6.1
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
4	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/38/2005	
Sender Ref: 39 FMD-186	
Date collected: Feb 2005	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK05-38.SEQ
Material used: BTy2	Date sequence last updated: 20/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/13/2005	PAK05-13	639	635	0	99.37	0.63
2	O/PAK/9/2005	PAK05-09	639	632	0	98.9	1.1
3	O/NEP/2/2003	NEP03-02	638	627	1	98.28	1.72
4	O/BHU/30/2004 (DQ165045)	BHU04-30	639	627	0	98.12	1.88
5	O/BHU/31/2004 (DQ164869)	BHU04-31	639	627	0	98.12	1.88
6	O/BHU/26/2004 (DQ165043)	BHU04-26	639	626	0	97.97	2.03
7	O/NEP/6/2003 (DQ165061)	NEP03-06	639	626	0	97.97	2.03
8	O/BHU/27/2004 (DQ164868)	BHU04-27	638	625	1	97.96	2.04
9	O/BHU/14/2003	BHU03-14	623	610	0	97.91	2.09
10	O/MAY/2/2004	MAY04-02	608	595	0	97.86	2.14

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 (AJ294927)	TAW99-02	639	602	0	94.21	5.79
2	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	567	0	88.73	11.27
3	O/IND/53/79 [AF292107]	IND79A53	639	565	0	88.42	11.58
4	O/IND/R2/75* [AF204276]	IND75--A	639	565	0	88.42	11.58
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	550	0	86.07	13.93
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	516	0	80.75	19.25
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	513	2	80.53	19.47
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	503	0	78.72	21.28

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/60/2006	
Sender Ref: 1 15S	
Date collected: Jan 2006	Topotype: ME-SA
Date received by WRLFMD: 03/03/2008	Genotype/strain: PanAsia-2
Date received for sequencing: 07/05/2008	Sequence filename: PAK06-60.SEQ
Species: Water buffalo	Date sequence last updated: 22/05/2008
Material used: BTy1	Total no. of comparisons: 1753
Region sequenced: VP1	Min. no. of nt for comparison: 300
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Total turn-around time: 101 days
No. of Nt determined: 639	Sequencing time: 36 days
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/IRN/22/2007	IRN07-22	639	639	0	100	0
2	O/PAK/15/2007	PAK07-15	639	639	0	100	0
3	O/PAK/21/2007	PAK07-21	639	639	0	100	0
4	O/PAK/35/2005	PAK05-35	639	639	0	100	0
5	O/PAK/56/2007	PAK07-56	639	639	0	100	0
6	O/PAK/63/2006	PAK06-63	639	639	0	100	0
7	O/PAK/73/2006	PAK06-73	639	639	0	100	0
8	O/PAK/33/2005	PAK05-33	639	638	0	99.84	0.16
9	O/PAK/71/2006	PAK06-71	639	638	0	99.84	0.16
10	O/PAK/7/2007	PAK07-07	635	632	4	99.53	0.47

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 (AJ294927)	TAW99-02	639	600	0	93.9	6.1
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
4	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/61/2006	
Sender Ref: 2 10S	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK06-61.SEQ
Material used: BTy2	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/22/2007	PAK07-22	639	638	0	99.84	0.16
2	O/PAK/23/2007	PAK07-23	639	638	0	99.84	0.16
3	O/PAK/28/2007	PAK07-28	638	636	1	99.69	0.31
4	O/PAK/50/2007	PAK07-50	639	637	0	99.69	0.31
5	O/PAK/2/2008	PAK08-02	639	636	0	99.53	0.47
6	O/PAK/49/2007	PAK07-49	639	635	0	99.37	0.63
7	O/IRN/56/2006	IRN06-56	639	632	0	98.9	1.1
8	O/PAK/10/2006	PAK06-10	639	632	0	98.9	1.1
9	O/PAK/16/2006	PAK06-16	639	632	0	98.9	1.1
10	O/PAK/4/2006	PAK06-04	639	632	0	98.9	1.1

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 (AJ294927)	TAW99-02	639	601	0	94.05	5.95
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/IND/R2/75* [AF204276]	IND75--A	639	567	0	88.73	11.27
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	567	0	88.73	11.27
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	556	0	87.01	12.99
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	553	0	86.54	13.46
7	O/MOR/1/91	MOR91-01	639	552	0	86.38	13.62
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	519	0	81.22	18.78
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	511	0	79.97	20.03

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/63/2006	
Sender Ref: 6 32S	
Date collected: Jan 2006	Topotype: ME-SA
Date received by WRLFMD: 03/03/2008	Genotype/strain: PanAsia-2
Date received for sequencing: 07/05/2008	Sequence filename: PAK06-63.SEQ
Species: Water buffalo	Date sequence last updated: 22/05/2008
Material used: BTy1	Total no. of comparisons: 1753
Region sequenced: VP1	Min. no. of nt for comparison: 300
RT-PCR primers: O-1C244F/EUR-2B52R;	Total turn-around time: 101 days
O-1C272F/EUR-2B52R	Sequencing time: 36 days
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/IRN/22/2007	IRN07-22	639	639	0	100	0
2	O/PAK/15/2007	PAK07-15	639	639	0	100	0
3	O/PAK/21/2007	PAK07-21	639	639	0	100	0
4	O/PAK/35/2005	PAK05-35	639	639	0	100	0
5	O/PAK/56/2007	PAK07-56	639	639	0	100	0
6	O/PAK/60/2006	PAK06-60	639	639	0	100	0
7	O/PAK/73/2006	PAK06-73	639	639	0	100	0
8	O/PAK/33/2005	PAK05-33	639	638	0	99.84	0.16
9	O/PAK/71/2006	PAK06-71	639	638	0	99.84	0.16
10	O/PAK/7/2007	PAK07-07	635	632	4	99.53	0.47

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 (AJ294927)	TAW99-02	639	600	0	93.9	6.1
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
4	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/66/2006	
Sender Ref: 17 105J	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK06-66.SEQ
Material used: BTy2	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/32/2005	PAK05-32	639	639	0	100	0
3	O/PAK/34/2005	PAK05-34	639	639	0	100	0
4	O/PAK/60/2007	PAK07-60	639	639	0	100	0
5	O/PAK/61/2007	PAK07-61	639	639	0	100	0
6	O/PAK/67/2006	PAK06-67	639	639	0	100	0
7	O/PAK/70/2006	PAK06-70	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/67/2006	
Sender Ref: 18 90J	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Water buffalo	Sequence filename: PAK06-67.SEQ
Material used: BTy2	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/32/2005	PAK05-32	639	639	0	100	0
3	O/PAK/34/2005	PAK05-34	639	639	0	100	0
4	O/PAK/60/2007	PAK07-60	639	639	0	100	0
5	O/PAK/61/2007	PAK07-61	639	639	0	100	0
6	O/PAK/66/2006	PAK06-66	639	639	0	100	0
7	O/PAK/70/2006	PAK06-70	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/68/2006	
Sender Ref: 23 107H	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia
Species: Water buffalo	Sequence filename: PAK06-68.SEQ
Material used: BTyl	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/1/2005	PAK05-01	639	636	0	99.53	0.47
2	O/PAK/16/2005	PAK05-16	639	636	0	99.53	0.47
3	O/PAK/20/2005	PAK05-20	639	636	0	99.53	0.47
4	O/PAK/7/2005	PAK05-07	639	636	0	99.53	0.47
5	O/PAK/2/2005	PAK05-02	639	635	0	99.37	0.63
6	O/PAK/3/2005	PAK05-03	639	635	0	99.37	0.63
7	O/PAK/11/2005	PAK05-11	639	634	0	99.22	0.78
8	O/PAK/12/2005	PAK05-12	639	634	0	99.22	0.78
9	O/PAK/15/2005	PAK05-15	639	634	0	99.22	0.78
10	O/PAK/17/2005	PAK05-17	639	634	0	99.22	0.78

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 (AJ294927)	TAW99-02	639	612	0	95.77	4.23
2	O/IND/53/79 [AF292107]	IND79A53	639	575	0	89.98	10.02
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	573	0	89.67	10.33
4	O/IND/R2/75* [AF204276]	IND75--A	639	569	0	89.05	10.95
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	562	0	87.95	12.05
6	O/MOR/1/91	MOR91-01	639	560	0	87.64	12.36
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	560	0	87.64	12.36
8	O/HKN/6/83 (AJ294919)	HKN83-06	637	522	2	81.95	18.05
9	O/PHI/5/95 (DQ164946)	PHI95-05	639	521	0	81.53	18.47
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	519	0	81.22	18.78

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/70/2006	
Sender Ref: 29 128A	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK06-70.SEQ
Material used: BTy2	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/32/2005	PAK05-32	639	639	0	100	0
3	O/PAK/34/2005	PAK05-34	639	639	0	100	0
4	O/PAK/60/2007	PAK07-60	639	639	0	100	0
5	O/PAK/61/2007	PAK07-61	639	639	0	100	0
6	O/PAK/66/2006	PAK06-66	639	639	0	100	0
7	O/PAK/67/2006	PAK06-67	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/71/2006	
Sender Ref: 30 129A	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK06-71.SEQ
Material used: BTy1	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/33/2005	PAK05-33	639	639	0	100	0
2	O/IRN/22/2007	IRN07-22	639	638	0	99.84	0.16
3	O/PAK/15/2007	PAK07-15	639	638	0	99.84	0.16
4	O/PAK/21/2007	PAK07-21	639	638	0	99.84	0.16
5	O/PAK/35/2005	PAK05-35	639	638	0	99.84	0.16
6	O/PAK/56/2007	PAK07-56	639	638	0	99.84	0.16
7	O/PAK/60/2006	PAK06-60	639	638	0	99.84	0.16
8	O/PAK/63/2006	PAK06-63	639	638	0	99.84	0.16
9	O/PAK/73/2006	PAK06-73	639	638	0	99.84	0.16
10	O/PAK/71/2007	PAK07-07	635	631	4	99.37	0.63

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 (AJ294927)	TAW99-02	639	599	0	93.74	6.26
2	O/IND/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	565	0	88.42	11.58
4	O/TAI/189/87* [TRRL]	TAI87-AC	639	563	0	88.11	11.89
5	O/IND/R2/75* [AF204276]	IND75--A	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	552	0	86.38	13.62
7	O/MOR/1/91	MOR91-01	639	550	0	86.07	13.93
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	527	0	82.47	17.53
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	518	2	81.32	18.68
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	509	0	79.66	20.34

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/72/2006	
Sender Ref: 31 133G	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Water buffalo	Sequence filename: PAK06-72.SEQ
Material used: BTy2	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	638	0	99.84	0.16
2	O/PAK/32/2005	PAK05-32	639	638	0	99.84	0.16
3	O/PAK/34/2005	PAK05-34	639	638	0	99.84	0.16
4	O/PAK/60/2007	PAK07-60	639	638	0	99.84	0.16
5	O/PAK/61/2007	PAK07-61	639	638	0	99.84	0.16
6	O/PAK/66/2006	PAK06-66	639	638	0	99.84	0.16
7	O/PAK/67/2006	PAK06-67	639	638	0	99.84	0.16
8	O/PAK/70/2006	PAK06-70	639	638	0	99.84	0.16
9	O/PAK/74/2006	PAK06-74	639	638	0	99.84	0.16
10	O/PAK/63/2007	PAK07-63	639	637	0	99.69	0.31

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 (AJ294927)	TAW99-02	639	595	0	93.11	6.89
2	O/IND/53/79 [AF292107]	IND79A53	639	567	0	88.73	11.27
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	563	0	88.11	11.89
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	561	0	87.79	12.21
5	O/IND/R2/75* [AF204276]	IND75--A	639	560	0	87.64	12.36
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	550	0	86.07	13.93
7	O/MOR/1/91	MOR91-01	639	548	0	85.76	14.24
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	525	0	82.16	17.84
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	516	2	81	19
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: 12/06/2008
WRL Ref No: PAK/73/2006	
Sender Ref: 32 132G	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Water buffalo	Sequence filename: PAK06-73.SEQ
Material used: BTyl	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/IRN/22/2007	IRN07-22	639	639	0	100	0
2	O/PAK/15/2007	PAK07-15	639	639	0	100	0
3	O/PAK/21/2007	PAK07-21	639	639	0	100	0
4	O/PAK/35/2005	PAK05-35	639	639	0	100	0
5	O/PAK/56/2007	PAK07-56	639	639	0	100	0
6	O/PAK/60/2006	PAK06-60	639	639	0	100	0
7	O/PAK/63/2006	PAK06-63	639	639	0	100	0
8	O/PAK/33/2005	PAK05-33	639	638	0	99.84	0.16
9	O/PAK/71/2006	PAK06-71	639	638	0	99.84	0.16
10	O/PAK/7/2007	PAK07-07	635	632	4	99.53	0.47

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 (AJ294927)	TAW99-02	639	600	0	93.9	6.1
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
4	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/74/2006	
Sender Ref: 38 1500	
Date collected: Jan 2006	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK06-74.SEQ
Material used: BTy3	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/32/2005	PAK05-32	639	639	0	100	0
3	O/PAK/34/2005	PAK05-34	639	639	0	100	0
4	O/PAK/60/2007	PAK07-60	639	639	0	100	0
5	O/PAK/61/2007	PAK07-61	639	639	0	100	0
6	O/PAK/66/2006	PAK06-66	639	639	0	100	0
7	O/PAK/67/2006	PAK06-67	639	639	0	100	0
8	O/PAK/70/2006	PAK06-70	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/53/2007	
Sender Ref: 3 21S	
Date collected: Jan 2007	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK07-53.SEQ
Material used: BTy2	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
RT-PCR primers: O-1C244F/EUR-2B52R;	Min. no. of nt for comparison: 300
O-1C272F/EUR-2B52R	Total turn-around time: 101 days
No. of Nt determined: 639	Sequencing time: 36 days
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/PAK/3/2007	PAK07-03	638	638	1	100	0
2	O/PAK/10/2006	PAK06-10	639	637	0	99.69	0.31
3	O/PAK/16/2006	PAK06-16	639	637	0	99.69	0.31
4	O/PAK/24/2007	PAK07-24	638	636	1	99.69	0.31
5	O/PAK/4/2006	PAK06-04	639	637	0	99.69	0.31
6	O/PAK/43/2007	PAK07-43	638	636	1	99.69	0.31
7	O/PAK/6/2006	PAK06-06	639	637	0	99.69	0.31
8	O/PAK/8/2006	PAK06-08	639	637	0	99.69	0.31
9	O/PAK/9/2006	PAK06-09	639	637	0	99.69	0.31
10	O/IRN/11/2006	IRN06-11	639	636	0	99.53	0.47

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 (AJ294927)	TAW99-02	639	603	0	94.37	5.63
2	O/IND/53/79 [AF292107]	IND79A53	639	572	0	89.51	10.49
3	O/IND/R2/75* [AF204276]	IND75--A	639	568	0	88.89	11.11
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	557	0	87.17	12.83
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	555	0	86.85	13.15
7	O/MOR/1/91	MOR91-01	639	553	0	86.54	13.46
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	520	0	81.38	18.62
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	511	0	79.97	20.03

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/56/2007	
Sender Ref: 8 46S	
Date collected: Jan 2007	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Water Buffalo	Sequence filename: PAK07-56.SEQ
Material used: BTyl	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/IRN/22/2007	IRN07-22	639	639	0	100	0
2	O/PAK/15/2007	PAK07-15	639	639	0	100	0
3	O/PAK/21/2007	PAK07-21	639	639	0	100	0
4	O/PAK/35/2005	PAK05-35	639	639	0	100	0
5	O/PAK/60/2006	PAK06-60	639	639	0	100	0
6	O/PAK/63/2006	PAK06-63	639	639	0	100	0
7	O/PAK/73/2006	PAK06-73	639	639	0	100	0
8	O/PAK/33/2005	PAK05-33	639	638	0	99.84	0.16
9	O/PAK/71/2006	PAK06-71	639	638	0	99.84	0.16
10	O/PAK/7/2007	PAK07-07	635	632	4	99.53	0.47

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 (AJ294927)	TAW99-02	639	600	0	93.9	6.1
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
4	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/60/2007	
Sender Ref: 20 92J	
Date collected: Jan 2007	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK07-60.SEQ
Material used: BTy1	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/32/2005	PAK05-32	639	639	0	100	0
3	O/PAK/34/2005	PAK05-34	639	639	0	100	0
4	O/PAK/61/2007	PAK07-61	639	639	0	100	0
5	O/PAK/66/2006	PAK06-66	639	639	0	100	0
6	O/PAK/67/2006	PAK06-67	639	639	0	100	0
7	O/PAK/70/2006	PAK06-70	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/61/2007	
Sender Ref: 25 118H	
Date collected: Jan 2007	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK07-61.SEQ
Material used: BTy1	Date sequence last updated: 22/05/2008
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/31/2005	PAK05-31	639	639	0	100	0
2	O/PAK/32/2005	PAK05-32	639	639	0	100	0
3	O/PAK/34/2005	PAK05-34	639	639	0	100	0
4	O/PAK/60/2007	PAK07-60	639	639	0	100	0
5	O/PAK/66/2006	PAK06-66	639	639	0	100	0
6	O/PAK/67/2006	PAK06-67	639	639	0	100	0
7	O/PAK/70/2006	PAK06-70	639	639	0	100	0
8	O/PAK/74/2006	PAK06-74	639	639	0	100	0
9	O/PAK/63/2007	PAK07-63	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	638	0	99.84	0.16

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 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	564	0	88.26	11.74
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
5	O/IND/R2/75* [AF204276]	IND75--A	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	549	0	85.92	14.08
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	526	0	82.32	17.68
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/63/2007	
Sender Ref: 33 140G	
Date collected: Jan 2007	Topotype: ME-SA
Date received by WRLFMD: 03/03/2008	Genotype/strain: PanAsia-2
Date received for sequencing: 07/05/2008	Sequence filename: PAK07-63.SEQ
Species: Cattle	Date sequence last updated: 22/05/2008
Material used: BTy1	Total no. of comparisons: 1753
Region sequenced: VP1	Min. no. of nt for comparison: 300
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Total turn-around time: 101 days
No. of Nt determined: 639	Sequencing time: 36 days
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/PAK/31/2005	PAK05-31	639	638	0	99.84	0.16
2	O/PAK/32/2005	PAK05-32	639	638	0	99.84	0.16
3	O/PAK/34/2005	PAK05-34	639	638	0	99.84	0.16
4	O/PAK/60/2007	PAK07-60	639	638	0	99.84	0.16
5	O/PAK/61/2007	PAK07-61	639	638	0	99.84	0.16
6	O/PAK/66/2006	PAK06-66	639	638	0	99.84	0.16
7	O/PAK/67/2006	PAK06-67	639	638	0	99.84	0.16
8	O/PAK/70/2006	PAK06-70	639	638	0	99.84	0.16
9	O/PAK/74/2006	PAK06-74	639	638	0	99.84	0.16
10	O/PAK/72/2006	PAK06-72	639	637	0	99.69	0.31

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 (AJ294927)	TAW99-02	639	597	0	93.43	6.57
2	O/IND/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/TAI/189/87* [TRRL]	TAI87-AC	639	565	0	88.42	11.58
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	563	0	88.11	11.89
5	O/IND/R2/75* [AF204276]	IND75--A	639	562	0	87.95	12.05
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	552	0	86.38	13.62
7	O/MOR/1/91	MOR91-01	639	550	0	86.07	13.93
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	527	0	82.47	17.53
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	518	2	81.32	18.68
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	509	0	79.66	20.34

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/66/2007 (A)	
Sender Ref: 45 518	
Date collected: Dec 2007	Topotype: ME-SA
Date received by WRLFMD: 03/03/2008	Genotype/strain: PanAsia-2
Date received for sequencing: 07/05/2008	Sequence filename: PAK07A66.SEQ
Species: Water Buffalo	Date sequence last updated: 22/05/2008
Material used: BTyl	Total no. of comparisons: 1752
Region sequenced: VP1	Min. no. of nt for comparison: 300
RT-PCR primers: O-1C244F/EUR-2B52R	Total turn-around time: 101 days
No. of Nt determined: 636	Sequencing time: 36 days
No. of ambiguities: 3	
Gene length: 639	

Comments: Two sequences were found in O/PAK/66/2007 using different RT-PCR primer sets. They have been labelled A and B.

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/31/2005	PAK05-31	636	628	0	98.74	1.26
2	O/PAK/32/2005	PAK05-32	636	628	0	98.74	1.26
3	O/PAK/34/2005	PAK05-34	636	628	0	98.74	1.26
4	O/PAK/60/2007	PAK07-60	636	628	0	98.74	1.26
5	O/PAK/61/2007	PAK07-61	636	628	0	98.74	1.26
6	O/PAK/66/2006	PAK06-66	636	628	0	98.74	1.26
7	O/PAK/67/2006	PAK06-67	636	628	0	98.74	1.26
8	O/PAK/70/2006	PAK06-70	636	628	0	98.74	1.26
9	O/PAK/74/2006	PAK06-74	636	628	0	98.74	1.26
10	O/PAK/63/2007	PAK07-63	636	627	0	98.58	1.42

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 (AJ294927)	TAW99-02	636	593	0	93.24	6.76
2	O/IND/53/79 [AF292107]	IND79A53	636	563	0	88.52	11.48
3	O/IND/R2/75* [AF204276]	IND75--A	636	560	0	88.05	11.95
4	O/TAI/189/87* [TRRL]	TAI87-AC	636	560	0	88.05	11.95
5	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	636	558	0	87.74	12.26
6	O/ISR/2/88 (DQ164899)	ISR88-02	636	547	0	86.01	13.99
7	O/MOR/1/91	MOR91-01	636	545	0	85.69	14.31
8	O/PHI/5/95 (DQ164946)	PHI95-05	636	519	0	81.6	18.4
9	O/HKN/6/83 (AJ294919)	HKN83-06	634	510	2	80.44	19.56
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	636	505	0	79.4	20.6

nt, nucleotides
 *, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/66/2007 (B)	
Sender Ref: 45 518	
Date collected: Dec 2007	Topotype: ME-SA
Date received by WRLFMD: 03/03/2008	Genotype/strain: PanAsia-2
Date received for sequencing: 07/05/2008	Sequence filename: PAK07B66.SEQ
Species: Water Buffalo	Date sequence last updated: 22/05/2008
Material used: BTy1	Total no. of comparisons: 1753
Region sequenced: VP1	Min. no. of nt for comparison: 300
RT-PCR primers: O-1C272F/EUR-2B52R	Total turn-around time: 101 days
No. of Nt determined: 639	Sequencing time: 36 days
No. of ambiguities: 0	
Gene length: 639	

Comments: Two sequences were found in O/PAK/66/2007 using different RT-PCR primer sets. They have been labelled A and B.

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/1/2008	PAK08-01	639	631	0	98.75	1.25
2	O/PAK/13/2005	PAK05-13	639	622	0	97.34	2.66
3	O/NEP/2/2003	NEP03-02	638	618	1	96.87	3.13
4	O/PAK/9/2005	PAK05-09	639	619	0	96.87	3.13
5	O/MAY/2/2004	MAY04-02	608	588	0	96.71	3.29
6	O/PAK/38/2005	PAK05-38	639	618	0	96.71	3.29
7	O/NEP/6/2003 (DQ165061)	NEP03-06	639	617	0	96.56	3.44
8	O/MAY/3/2004	MAY04-03	606	585	0	96.53	3.47
9	O/BHU/14/2003	BHU03-14	623	601	0	96.47	3.53
10	O/AFG/2004 (PIADC)	AFG04-AA	639	616	0	96.4	3.6

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 (AJ294927)	TAW99-02	639	602	0	94.21	5.79
2	O/IND/53/79 [AF292107]	IND79A53	639	564	0	88.26	11.74
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
4	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	558	0	87.32	12.68
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	556	0	87.01	12.99
7	O/MOR/1/91	MOR91-01	639	553	0	86.54	13.46
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	519	0	81.22	18.78
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	511	2	80.22	19.78
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/1/2008	
Sender Ref: 43 514	
Date collected: 2008	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Cattle	Sequence filename: PAK08-01.SEQ
Material used: BTy1	Date sequence last updated: 08/05/08
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/66/2007 (B)	PAK07B66	639	631	0	98.75	1.25
2	O/PAK/13/2005	PAK05-13	639	626	0	97.97	2.03
3	O/NEP/2/2003	NEP03-02	638	624	1	97.81	2.19
4	O/MAY/2/2004	MAY04-02	608	593	0	97.53	2.47
5	O/NEP/6/2003 (DQ165061)	NEP03-06	639	623	0	97.5	2.5
6	O/PAK/9/2005	PAK05-09	639	623	0	97.5	2.5
7	O/BHU/14/2003	BHU03-14	623	607	0	97.43	2.57
8	O/MAY/3/2004	MAY04-03	606	590	0	97.36	2.64
9	O/AFG/2004 (PIADC)	AFG04-AA	639	622	0	97.34	2.66
10	O/BHU/30/2004 (DQ165045)	BHU04-30	639	622	0	97.34	2.66

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 (AJ294927)	TAW99-02	639	608	0	95.15	4.85
2	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	568	0	88.89	11.11
4	O/IND/R2/75* [AF204276]	IND75--A	639	567	0	88.73	11.27
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	559	0	87.48	12.52
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	520	0	81.38	18.62
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	514	2	80.69	19.31
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	514	0	80.44	19.56

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 12/06/2008
WRL Ref No: PAK/2/2008	
Sender Ref: 44 515	
Date collected: 2008	
Date received by WRLFMD: 03/03/2008	Topotype: ME-SA
Date received for sequencing: 07/05/2008	Genotype/strain: PanAsia-2
Species: Water buffalo	Sequence filename: PAK08-02.SEQ
Material used: BTyl	Date sequence last updated: 08/05/08
Region sequenced: VP1	Total no. of comparisons: 1753
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: 101 days
No. of ambiguities: 0	Sequencing time: 36 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/PAK/22/2007	PAK07-22	639	637	0	99.69	0.31
2	O/PAK/23/2007	PAK07-23	639	637	0	99.69	0.31
3	O/PAK/28/2007	PAK07-28	638	635	1	99.53	0.47
4	O/PAK/50/2007	PAK07-50	639	636	0	99.53	0.47
5	O/PAK/61/2006	PAK06-61	639	636	0	99.53	0.47
6	O/PAK/49/2007	PAK07-49	639	634	0	99.22	0.78
7	O/IRN/56/2006	IRN06-56	639	631	0	98.75	1.25
8	O/PAK/10/2006	PAK06-10	639	631	0	98.75	1.25
9	O/PAK/16/2006	PAK06-16	639	631	0	98.75	1.25
10	O/PAK/4/2006	PAK06-04	639	631	0	98.75	1.25

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 (AJ294927)	TAW99-02	639	600	0	93.9	6.1
2	O/IND/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
3	O/IND/R2/75* [AF204276]	IND75--A	639	566	0	88.58	11.42
4	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	555	0	86.85	13.15
6	O/MOR/1/91	MOR91-01	639	553	0	86.54	13.46
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	552	0	86.38	13.62
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	520	0	81.38	18.62
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	512	2	80.38	19.62
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	513	0	80.28	19.72

nt, nucleotides

*, not a WRLFMD reference number

Comparison of FMD type O viruses isolated from Pakistan between 2005-2008

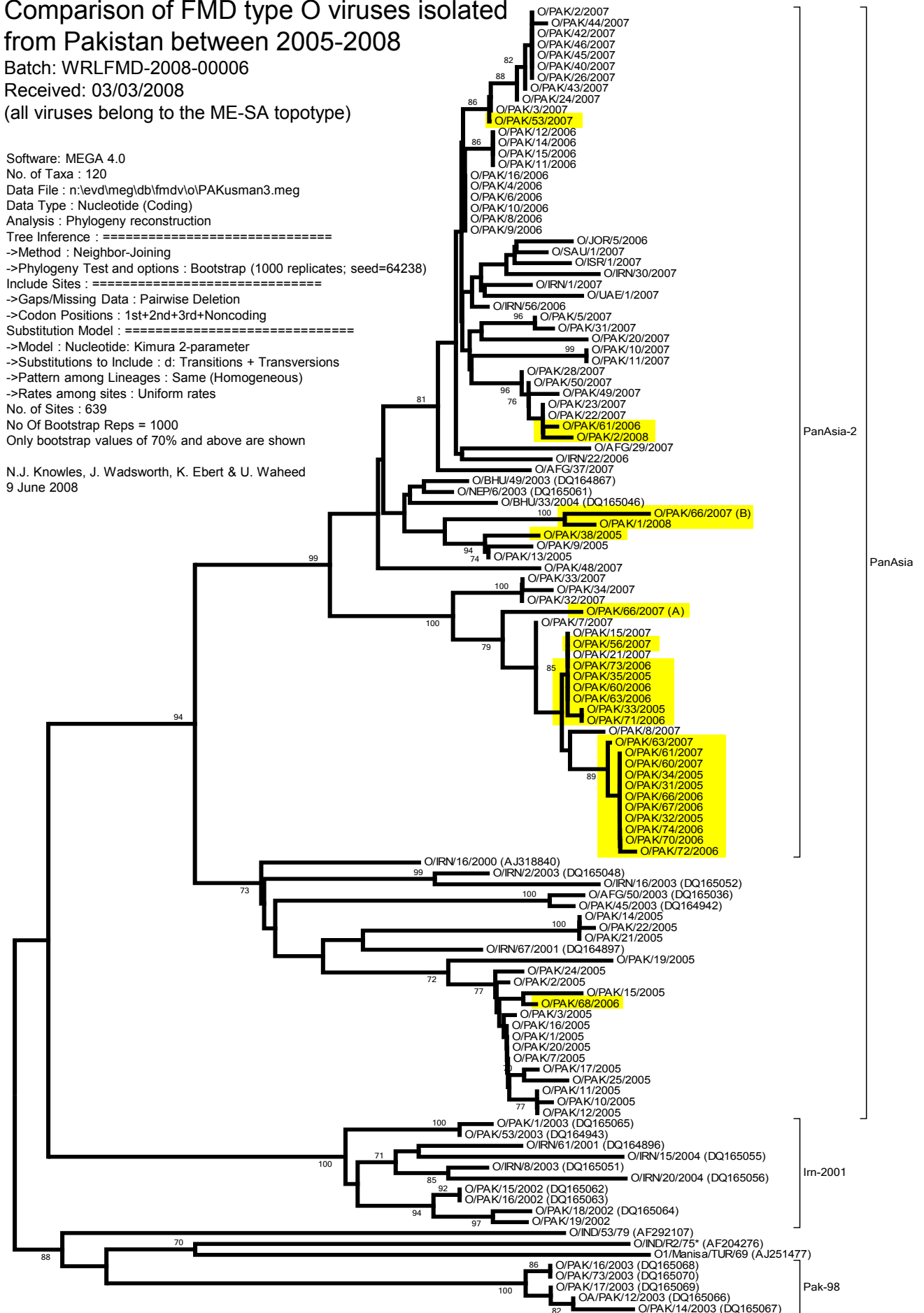
Batch: WRLFMD-2008-00006

Received: 03/03/2008

(all viruses belong to the ME-SA toptotype)

Software: MEGA 4.0
 No. of Taxa : 120
 Data File : n:\levd\meg\db\fmdv\o\PAKusman3.meg
 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, K. Ebert & U. Waheed
 9 June 2008



0.01