

Serotype: O	Report date: 31/10/2005						
WRL Ref No: PAK/vaccine							
Sender Ref:							
Date collected: not known							
Date received by WRLFMD: 25/08/2005	Topotype: Middle East-South Asia (ME-SA)						
Date received for sequencing: 02/09/2005	Genotype/strain: Pak98						
Species: not known	Sequence filename: PAK05-AA.SEQ						
Material used: BTy1	Date sequence last updated: 31/10/2005						
Region sequenced: VP1	Total no. of comparisons: 1744						
RT-PCR primers: O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300						
No. of Nt determined: 639	Total turn-around time: 67 days						
No. of ambiguities: 0	Sequencing time: 59 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/17/2003	PAK03-17	638	638	1	100	0
2	O/PAK/12/2003	PAK03-12	638	637	1	99.84	0.16
3	O/PAK/70/2003	PAK03-70	571	569	0	99.65	0.35
4	O/PAK/1/98	PAK98-01	504	501	7	99.4	0.6
5	O/PAK/16/2003	PAK03-16	639	634	0	99.22	0.78
6	O/PAK/73/2003	PAK03-73	639	634	0	99.22	0.78
7	O/PAK/14/2003	PAK03-14	638	632	1	99.06	0.94
8	O/NEP/90/96	NEP96-90	343	316	0	92.13	7.87
9	O/NEP/64/96	NEP96-64	302	278	1	92.05	7.95
10	O/BAN/3/96	BAN96-03	410	373	0	90.98	9.02
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O1/Manisa/TUR/69	TUR69--E	639	579	0	90.61	9.39
2	O/TAW/2/99	TAW99-02	639	574	0	89.83	10.17
3	O/IND/R2/75* [AF204276]	IND75--A	639	572	0	89.51	10.49
4	O/IND/53/79 [AF292107]	IND79A53	639	570	0	89.2	10.8
5	O/ISR/2/88	ISR88-02	639	565	0	88.42	11.58
6	O/MOR/1/91	MOR91-01	639	562	0	87.95	12.05
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	544	0	85.13	14.87
8	O1/BFS 1860/UK/67	UKG67--A	639	518	0	81.06	18.94
9	O/HKN/6/83	HKN83-06	637	513	2	80.53	19.47
10	O/PHI/5/95	PHI95-05	639	514	0	80.44	19.56
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: O
WRL Ref No: PAK/14/2005
Sender Ref: 8
Date collected: 09/01/2005
Date received by WRLFMD: 25/08/2005
Date received for sequencing: 02/09/2005
Species: Cattle
Material used: BTy1
Region sequenced: VP1
RT-PCR primers: O-1C272F/EUR-2B52R
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 31/10/2005
Topotype: Middle East-South Asia (ME-SA)
Genotype/strain: PanAsia
Sequence filename: PAK05-14.SEQ
Date sequence last updated: 12/10/2005
Total no. of comparisons: 1744
Min. no. of nt for comparison: 300
Total turn-around time: 67 days
Sequencing time: 59 days

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/21/2005	PAK05-21	639	639	0	100	0
2	O/PAK/22/2005	PAK05-22	639	638	0	99.84	0.16
3	O/IRN/67/2001	IRN01-67	639	616	0	96.4	3.6
4	O/PAK/19/2005	PAK05-19	638	614	1	96.24	3.76
5	O/BAR/1/99	BAR99-01	323	310	0	95.98	4.02
6	O/Tibet/CHA/3/99	CHA99-03	639	613	0	95.93	4.07
7	O/NEP/4/98	NEP98-04	639	612	0	95.77	4.23
8	O/BAR/8/98	BAR98-08	639	612	0	95.77	4.23
9	O/Tibet/CHA/2/99	CHA99-02	639	612	0	95.77	4.23
10	O/LEB/6/98	LEB98-06	560	536	0	95.71	4.29

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	611	0	95.62	4.38
2	O/IND/R2/75* [AF204276]	IND75--A	639	569	0	89.05	10.95
3	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
4	O1/Manisa/TUR/69	TUR69--E	639	567	0	88.73	11.27
5	O/ISR/2/88	ISR88-02	639	563	0	88.11	11.89
6	O/MOR/1/91	MOR91-01	639	559	0	87.48	12.52
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	551	0	86.23	13.77
8	O1/BFS 1860/UK/67	UKG67--A	639	519	0	81.22	18.78
9	O/PHI/5/95	PHI95-05	639	514	0	80.44	19.56
10	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 31/10/2005						
WRL Ref No: PAK/15/2005							
Sender Ref: 9							
Date collected: 09/01/2005							
Date received by WRLFMD: 25/08/2005	Topotype: Middle East-South Asia (ME-SA)						
Date received for sequencing: 02/09/2005	Genotype/strain: PanAsia						
Species: Cattle	Sequence filename: PAK05-15.SEQ						
Material used: BTy1	Date sequence last updated: 12/10/2005						
Region sequenced: VP1	Total no. of comparisons: 1744						
RT-PCR primers: O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300						
No. of Nt determined: 639	Total turn-around time: 67 days						
No. of ambiguities: 0	Sequencing time: 59 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/16/2005	PAK05-16	639	633	0	99.06	0.94
2	O/PAK/20/2005	PAK05-20	639	633	0	99.06	0.94
3	O/PAK/1/2005	PAK05-01	639	633	0	99.06	0.94
4	O/PAK/7/2005	PAK05-07	639	633	0	99.06	0.94
5	O/PAK/3/2005	PAK05-03	639	632	0	98.9	1.1
6	O/PAK/10/2005	PAK05-10	639	632	0	98.9	1.1
7	O/PAK/2/2005	PAK05-02	639	632	0	98.9	1.1
8	O/PAK/11/2005	PAK05-11	639	631	0	98.75	1.25
9	O/PAK/12/2005	PAK05-12	639	631	0	98.75	1.25
10	O/PAK/17/2005	PAK05-17	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	TAW99-02	639	609	0	95.31	4.69
2	O1/Manisa/TUR/69	TUR69--E	639	570	0	89.2	10.8
3	O/IND/53/79 [AF292107]	IND79A53	639	570	0	89.2	10.8
4	O/IND/R2/75* [AF204276]	IND75--A	639	567	0	88.73	11.27
5	O/MOR/1/91	MOR91-01	639	559	0	87.48	12.52
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	559	0	87.48	12.52
7	O/ISR/2/88	ISR88-02	639	559	0	87.48	12.52
8	O/HKN/6/83	HKN83-06	637	520	2	81.63	18.37
9	O/PHI/5/95	PHI95-05	639	521	0	81.53	18.47
10	O1/BFS 1860/UK/67	UKG67--A	639	520	0	81.38	18.62
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: O
WRL Ref No: PAK/16/2005
Sender Ref: 3
Date collected: 12/01/2005
Date received by WRLFMD: 25/08/2005
Date received for sequencing: 02/09/2005
Species: Cattle
Material used: BTy1
Region sequenced: VP1
RT-PCR primers: O-1C272F/EUR-2B52R
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 31/10/2005
Topotype: Middle East-South Asia (ME-SA)
Genotype/strain: PanAsia
Sequence filename: PAK05-16.SEQ
Date sequence last updated: 13/10/2005
Total no. of comparisons: 1744
Min. no. of nt for comparison: 300
Total turn-around time: 67 days
Sequencing time: 59 days

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/7/2005	PAK05-07	639	639	0	100	0
2	O/PAK/20/2005	PAK05-20	639	639	0	100	0
3	O/PAK/1/2005	PAK05-01	639	639	0	100	0
4	O/PAK/3/2005	PAK05-03	639	638	0	99.84	0.16
5	O/PAK/2/2005	PAK05-02	639	638	0	99.84	0.16
6	O/PAK/11/2005	PAK05-11	639	637	0	99.69	0.31
7	O/PAK/12/2005	PAK05-12	639	637	0	99.69	0.31
8	O/PAK/17/2005	PAK05-17	639	637	0	99.69	0.31
9	O/PAK/24/2005	PAK05-24	639	637	0	99.69	0.31
10	O/PAK/10/2005	PAK05-10	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	TAW99-02	639	611	0	95.62	4.38
2	O/IND/53/79 [AF292107]	IND79A53	639	575	0	89.98	10.02
3	O1/Manisa/TUR/69	TUR69--E	639	574	0	89.83	10.17
4	O/IND/R2/75* [AF204276]	IND75--A	639	572	0	89.51	10.49
5	O/ISR/2/88	ISR88-02	639	563	0	88.11	11.89
6	O/MOR/1/91	MOR91-01	639	559	0	87.48	12.52
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	559	0	87.48	12.52
8	O/HKN/6/83	HKN83-06	637	520	2	81.63	18.37
9	O/PHI/5/95	PHI95-05	639	519	0	81.22	18.78
10	O1/BFS 1860/UK/67	UKG67--A	639	519	0	81.22	18.78

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 31/10/2005
WRL Ref No: PAK/17/2005	
Sender Ref: 4	
Date collected: 22/01/2005	
Date received by WRLFMD: 25/08/2005	Topotype: Middle East-South Asia (ME-SA)
Date received for sequencing: 02/09/2005	Genotype/strain: PanAsia
Species: Cattle	Sequence filename: PAK05-17.SEQ
Material used: BTy1	Date sequence last updated: 13/10/2005
Region sequenced: VP1	Total no. of comparisons: 1744
RT-PCR primers: O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 67 days
No. of ambiguities: 0	Sequencing time: 59 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/7/2005	PAK05-07	639	637	0	99.69	0.31
2	O/PAK/16/2005	PAK05-16	639	637	0	99.69	0.31
3	O/PAK/1/2005	PAK05-01	639	637	0	99.69	0.31
4	O/PAK/20/2005	PAK05-20	639	637	0	99.69	0.31
5	O/PAK/3/2005	PAK05-03	639	636	0	99.53	0.47
6	O/PAK/2/2005	PAK05-02	639	636	0	99.53	0.47
7	O/PAK/11/2005	PAK05-11	639	635	0	99.37	0.63
8	O/PAK/25/2005	PAK05-25	639	635	0	99.37	0.63
9	O/PAK/12/2005	PAK05-12	639	635	0	99.37	0.63
10	O/PAK/24/2005	PAK05-24	639	635	0	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	TAW99-02	639	609	0	95.31	4.69
2	O/IND/53/79 [AF292107]	IND79A53	639	573	0	89.67	10.33
3	O1/Manisa/TUR/69	TUR69--E	639	572	0	89.51	10.49
4	O/IND/R2/75* [AF204276]	IND75--A	639	570	0	89.2	10.8
5	O/ISR/2/88	ISR88-02	639	562	0	87.95	12.05
6	O/MOR/1/91	MOR91-01	639	557	0	87.17	12.83
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	557	0	87.17	12.83
8	O/HKN/6/83	HKN83-06	637	518	2	81.32	18.68
9	O1/BFS 1860/UK/67	UKG67--A	639	519	0	81.22	18.78
10	O/PHI/5/95	PHI95-05	639	518	0	81.06	18.94

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: PAK/19/2005
Sender Ref: 6
Date collected: 25/01/2005
Date received by WRLFMD: 25/08/2005
Date received for sequencing: 02/09/2005
Species: Cattle
Material used: BTy1
Region sequenced: VP1
RT-PCR primers: O-1C272F/EUR-2B52R
No. of Nt determined: 638
No. of ambiguities: 1
Gene length: 639

Report date: 31/10/2005
Topotype: Middle East-South Asia (ME-SA)
Genotype/strain: PanAsia
Sequence filename: PAK05-19.SEQ
Date sequence last updated: 13/10/2005
Total no. of comparisons: 1744
Min. no. of nt for comparison: 300
Total turn-around time: 67 days
Sequencing time: 59 days

Comments: FMDV type Asia 1 was also present in this sample.

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/10/2005	PAK05-10	638	624	1	97.81	2.19
2	O/PAK/15/2005	PAK05-15	638	623	1	97.65	2.35
3	O/PAK/11/2005	PAK05-11	638	623	1	97.65	2.35
4	O/PAK/12/2005	PAK05-12	638	623	1	97.65	2.35
5	O/PAK/20/2005	PAK05-20	638	623	1	97.65	2.35
6	O/PAK/7/2005	PAK05-07	638	623	1	97.65	2.35
7	O/PAK/16/2005	PAK05-16	638	623	1	97.65	2.35
8	O/PAK/1/2005	PAK05-01	638	623	1	97.65	2.35
9	O/PAK/3/2005	PAK05-03	638	622	1	97.49	2.51
10	O/PAK/2/2005	PAK05-02	638	622	1	97.49	2.51

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	638	606	1	94.98	5.02
2	O1/Manisa/TUR/69	TUR69--E	638	570	1	89.34	10.66
3	O/IND/53/79 [AF292107]	IND79A53	638	570	1	89.34	10.66
4	O/IND/R2/75* [AF204276]	IND75--A	638	568	1	89.03	10.97
5	O/ISR/2/88	ISR88-02	638	559	1	87.62	12.38
6	O/MOR/1/91	MOR91-01	638	557	1	87.3	12.7
7	O/TAI/189/87* [TRRL]	TAI87-AC	638	552	1	86.52	13.48
8	O/HKN/6/83	HKN83-06	636	514	3	80.82	19.18
9	O1/BFS 1860/UK/67	UKG67--A	638	515	1	80.72	19.28
10	O/PHI/5/95	PHI95-05	638	511	1	80.09	19.91

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 31/10/2005
WRL Ref No: PAK/20/2005	
Sender Ref: 7	
Date collected: 26/01/2005	
Date received by WRLFMD: 25/08/2005	Topotype: Middle East-South Asia (ME-SA)
Date received for sequencing: 02/09/2005	Genotype/strain: PanAsia
Species: Cattle	Sequence filename: PAK05-20.SEQ
Material used: BTy1	Date sequence last updated: 18/10/2005
Region sequenced: VP1	Total no. of comparisons: 1744
RT-PCR primers: O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 67 days
No. of ambiguities: 0	Sequencing time: 59 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/7/2005	PAK05-07	639	639	0	100	0
2	O/PAK/16/2005	PAK05-16	639	639	0	100	0
3	O/PAK/1/2005	PAK05-01	639	639	0	100	0
4	O/PAK/3/2005	PAK05-03	639	638	0	99.84	0.16
5	O/PAK/2/2005	PAK05-02	639	638	0	99.84	0.16
6	O/PAK/11/2005	PAK05-11	639	637	0	99.69	0.31
7	O/PAK/12/2005	PAK05-12	639	637	0	99.69	0.31
8	O/PAK/24/2005	PAK05-24	639	637	0	99.69	0.31
9	O/PAK/17/2005	PAK05-17	639	637	0	99.69	0.31
10	O/PAK/10/2005	PAK05-10	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	TAW99-02	639	611	0	95.62	4.38
2	O/IND/53/79 [AF292107]	IND79A53	639	575	0	89.98	10.02
3	O1/Manisa/TUR/69	TUR69--E	639	574	0	89.83	10.17
4	O/IND/R2/75* [AF204276]	IND75--A	639	572	0	89.51	10.49
5	O/ISR/2/88	ISR88-02	639	563	0	88.11	11.89
6	O/MOR/1/91	MOR91-01	639	559	0	87.48	12.52
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	559	0	87.48	12.52
8	O/HKN/6/83	HKN83-06	637	520	2	81.63	18.37
9	O/PHI/5/95	PHI95-05	639	519	0	81.22	18.78
10	O1/BFS 1860/UK/67	UKG67--A	639	519	0	81.22	18.78

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: PAK/21/2005
Sender Ref: 10
Date collected: 07/02/2005
Date received by WRLFMD: 25/08/2005
Date received for sequencing: 02/09/2005
Species: Cattle
Material used: BTy1
Region sequenced: VP1
RT-PCR primers: O-1C272F/EUR-2B52R
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 31/10/2005
Topotype: Middle East-South Asia (ME-SA)
Genotype/strain: PanAsia
Sequence filename: PAK05-21.SEQ
Date sequence last updated: 18/10/2005
Total no. of comparisons: 1744
Min. no. of nt for comparison: 300
Total turn-around time: 67 days
Sequencing time: 59 days

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/14/2005	PAK05-14	639	639	0	100	0
2	O/PAK/22/2005	PAK05-22	639	638	0	99.84	0.16
3	O/IRN/67/2001	IRN01-67	639	616	0	96.4	3.6
4	O/PAK/19/2005	PAK05-19	638	614	1	96.24	3.76
5	O/BAR/1/99	BAR99-01	323	310	0	95.98	4.02
6	O/Tibet/CHA/3/99	CHA99-03	639	613	0	95.93	4.07
7	O/NEP/4/98	NEP98-04	639	612	0	95.77	4.23
8	O/BAR/8/98	BAR98-08	639	612	0	95.77	4.23
9	O/Tibet/CHA/2/99	CHA99-02	639	612	0	95.77	4.23
10	O/LEB/6/98	LEB98-06	560	536	0	95.71	4.29

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	611	0	95.62	4.38
2	O/IND/R2/75* [AF204276]	IND75--A	639	569	0	89.05	10.95
3	O/IND/53/79 [AF292107]	IND79A53	639	568	0	88.89	11.11
4	O1/Manisa/TUR/69	TUR69--E	639	567	0	88.73	11.27
5	O/ISR/2/88	ISR88-02	639	563	0	88.11	11.89
6	O/MOR/1/91	MOR91-01	639	559	0	87.48	12.52
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	551	0	86.23	13.77
8	O1/BFS 1860/UK/67	UKG67--A	639	519	0	81.22	18.78
9	O/PHI/5/95	PHI95-05	639	514	0	80.44	19.56
10	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 31/10/2005
WRL Ref No: PAK/22/2005	
Sender Ref: 11	
Date collected: 07/02/2005	
Date received by WRLFMD: 25/08/2005	Topotype: Middle East-South Asia (ME-SA)
Date received for sequencing: 02/09/2005	Genotype/strain: PanAsia
Species: Cattle	Sequence filename: PAK05-22.SEQ
Material used: BTy1	Date sequence last updated: 18/10/2005
Region sequenced: VP1	Total no. of comparisons: 1744
RT-PCR primers: O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 67 days
No. of ambiguities: 0	Sequencing time: 59 days
Gene length: 639	

Comments: FMDV type Asia 1 was also present in this sample.

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/14/2005	PAK05-14	639	638	0	99.84	0.16
2	O/PAK/21/2005	PAK05-21	639	638	0	99.84	0.16
3	O/IRN/67/2001	IRN01-67	639	615	0	96.24	3.76
4	O/PAK/19/2005	PAK05-19	638	613	1	96.08	3.92
5	O/Tibet/CHA/3/99	CHA99-03	639	612	0	95.77	4.23
6	O/LEB/6/98	LEB98-06	560	536	0	95.71	4.29
7	O/BAR/1/99	BAR99-01	323	309	0	95.67	4.33
8	O/NEP/4/98	NEP98-04	639	611	0	95.62	4.38
9	O/Tibet/CHA/2/99	CHA99-02	639	611	0	95.62	4.38
10	O/BAR/8/98	BAR98-08	639	611	0	95.62	4.38

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	610	0	95.46	4.54
2	O/IND/R2/75* [AF204276]	IND75--A	639	570	0	89.2	10.8
3	O/IND/53/79 [AF292107]	IND79A53	639	569	0	89.05	10.95
4	O1/Manisa/TUR/69	TUR69--E	639	568	0	88.89	11.11
5	O/ISR/2/88	ISR88-02	639	562	0	87.95	12.05
6	O/MOR/1/91	MOR91-01	639	558	0	87.32	12.68
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	552	0	86.38	13.62
8	O1/BFS 1860/UK/67	UKG67--A	639	518	0	81.06	18.94
9	O/PHI/5/95	PHI95-05	639	514	0	80.44	19.56
10	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: PAK/24/2005
Sender Ref: 13
Date collected: 14/02/2005
Date received by WRLFMD: 25/08/2005
Date received for sequencing: 02/09/2005
Species: Cattle
Material used: BTy1
Region sequenced: VP1
RT-PCR primers: O-1C272F/EUR-2B52R
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 31/10/2005
Topotype: Middle East-South Asia (ME-SA)
Genotype/strain: PanAsia
Sequence filename: PAK05-24.SEQ
Date sequence last updated: 31/10/2005
Total no. of comparisons: 1744
Min. no. of nt for comparison: 300
Total turn-around time: 67 days
Sequencing time: 59 days

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PAK/7/2005	PAK05-07	639	637	0	99.69	0.31
2	O/PAK/16/2005	PAK05-16	639	637	0	99.69	0.31
3	O/PAK/1/2005	PAK05-01	639	637	0	99.69	0.31
4	O/PAK/20/2005	PAK05-20	639	637	0	99.69	0.31
5	O/PAK/3/2005	PAK05-03	639	636	0	99.53	0.47
6	O/PAK/2/2005	PAK05-02	639	636	0	99.53	0.47
7	O/PAK/12/2005	PAK05-12	639	635	0	99.37	0.63
8	O/PAK/11/2005	PAK05-11	639	635	0	99.37	0.63
9	O/PAK/17/2005	PAK05-17	639	635	0	99.37	0.63
10	O/PAK/10/2005	PAK05-10	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	TAW99-02	639	609	0	95.31	4.69
2	O/IND/53/79 [AF292107]	IND79A53	639	573	0	89.67	10.33
3	O/IND/R2/75* [AF204276]	IND75--A	639	572	0	89.51	10.49
4	O1/Manisa/TUR/69	TUR69--E	639	572	0	89.51	10.49
5	O/ISR/2/88	ISR88-02	639	563	0	88.11	11.89
6	O/MOR/1/91	MOR91-01	639	559	0	87.48	12.52
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	559	0	87.48	12.52
8	O/HKN/6/83	HKN83-06	637	520	2	81.63	18.37
9	O/PHI/5/95	PHI95-05	639	521	0	81.53	18.47
10	O1/BFS 1860/UK/67	UKG67--A	639	519	0	81.22	18.78

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 31/10/2005
WRL Ref No: PAK/25/2005	
Sender Ref: 14	
Date collected: 22/04/2005	
Date received by WRLFMD: 25/08/2005	Topotype: Middle East-South Asia (ME-SA)
Date received for sequencing: 02/09/2005	Genotype/strain: PanAsia
Species: Cattle	Sequence filename: PAK05-25.SEQ
Material used: BTy1	Date sequence last updated: 31/10/2005
Region sequenced: VP1	Total no. of comparisons: 1744
RT-PCR primers: O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 67 days
No. of ambiguities: 0	Sequencing time: 59 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/7/2005	PAK05-07	639	635	0	99.37	0.63
2	O/PAK/16/2005	PAK05-16	639	635	0	99.37	0.63
3	O/PAK/17/2005	PAK05-17	639	635	0	99.37	0.63
4	O/PAK/1/2005	PAK05-01	639	635	0	99.37	0.63
5	O/PAK/20/2005	PAK05-20	639	635	0	99.37	0.63
6	O/PAK/3/2005	PAK05-03	639	634	0	99.22	0.78
7	O/PAK/2/2005	PAK05-02	639	634	0	99.22	0.78
8	O/PAK/24/2005	PAK05-24	639	633	0	99.06	0.94
9	O/PAK/12/2005	PAK05-12	639	633	0	99.06	0.94
10	O/PAK/11/2005	PAK05-11	639	633	0	99.06	0.94

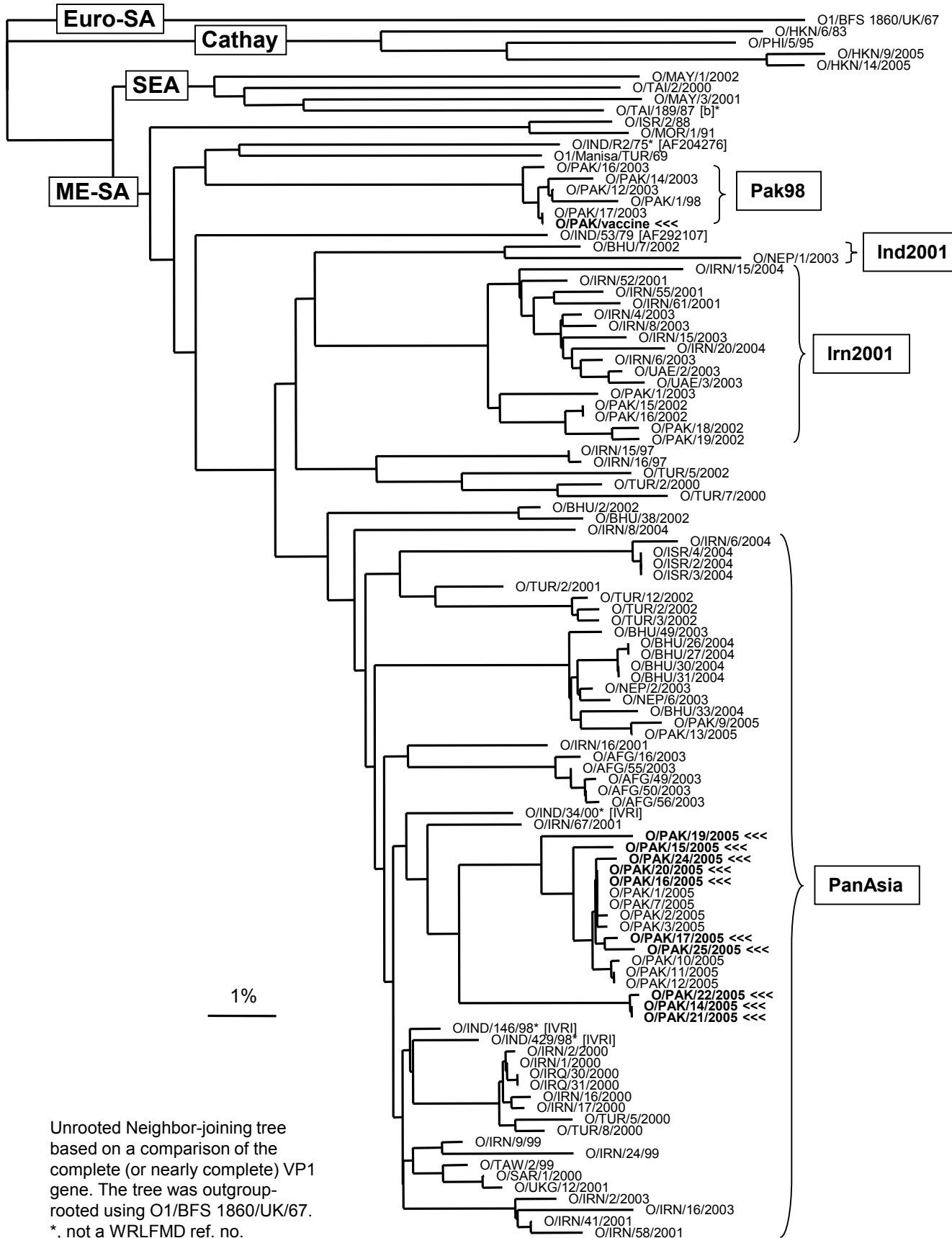
Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99	TAW99-02	639	607	0	94.99	5.01
2	O/IND/53/79 [AF292107]	IND79A53	639	575	0	89.98	10.02
3	O1/Manisa/TUR/69	TUR69--E	639	574	0	89.83	10.17
4	O/IND/R2/75* [AF204276]	IND75--A	639	570	0	89.2	10.8
5	O/ISR/2/88	ISR88-02	639	561	0	87.79	12.21
6	O/MOR/1/91	MOR91-01	639	557	0	87.17	12.83
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	555	0	86.85	13.15
8	O1/BFS 1860/UK/67	UKG67--A	639	521	0	81.53	18.47
9	O/HKN/6/83	HKN83-06	637	518	2	81.32	18.68
10	O/PHI/5/95	PHI95-05	639	517	0	80.91	19.09

nt, nucleotides

*, not a WRLFMD reference number

Report on: O Pakistan 2005



1%

Unrooted Neighbor-joining tree based on a comparison of the complete (or nearly complete) VP1 gene. The tree was outgroup-rooted using O1/BFS 1860/UK/67. *, not a WRLFMD ref. no.