



Institute for Animal Health

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Page 1 of 12

To: [REDACTED]
Fax Number: [REDACTED]
To: [REDACTED]
Email: [REDACTED]
From: [REDACTED]
Date: 7th April 2009
Subject: O Sequencing Report
No. Of Pages: 12

FAX

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Thank you.

Dear [REDACTED]

Virus isolates: O EGY/10/2006, O EGY/11/2006, O EGY/1/2008, O EGY/3/2008, O EGY/4/2008, O EGY/5/2008, O EGY/7/2008, O EGY/1/2009, O EGY/6/2009 and O EGY/8/2009

Sequencing work has now been completed in respect of the above virus isolates received at IAH Pirbright on 19th of March 2009 and the details are as attached. Please note all of our phylogenetic trees can be accessed via the internet at:
http://www.iah.bbsrc.ac.uk/primary_index/current_research/virus/Picomaviridae/Aphthovirus/index.html

Yours sincerely

Please note close similarity with
O1 sharquia / EGY / 72

Head: World Reference Laboratory for FMD
[REDACTED]

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Molecular Epidemiology Report Form

IAH-P-EP-MEG-FOR-005-1

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Serotype: O WRL RefNo: EGY/10/2006 Sender Ref: VSVRI No. 1 Date collected: 01/01/2006 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 31/03/2009 Species: Cattle Material used: BTy1 Region sequenced: VPI RT-PCR primers: O1-IC244F/EUR-2B52R; O1-IC272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY06-10.SEQ Date sequence last updated: 02/04/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 3 days																																																																																																
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Serotype: O WRL Ref No: EGY/11/2006 Sender Ref: VSVRI No. 2 Date collected: 01/01/2006 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 31/03/2009 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY06-11.SEQ Date sequence last updated: 02/04/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 3 days
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/1/2008	EGY08-01	639	639	0	100	0
2	O/EGY/10/2006	EGY06-10	639	639	0	100	0
3	O/EGY/4/2008	EGY08-04	639	639	0	100	0
4	O/EGY/3/2008	EGY08-03	639	637	0	99.69	0.31
5	O/EGY/5/2008	EGY08-05	639	637	0	99.69	0.31
6	O/EGY/6/2009	EGY09-06	639	637	0	99.69	0.31
7	O/EGY/7/2008	EGY08-07	639	637	0	99.69	0.31
8	O/EGY/8/2006	EGY06-08	639	637	0	99.69	0.31
9	O/EGY/8/2009	EGY09-08	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	634	0	99.22	0.78
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	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	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	592	0	92.64	7.36
2	O1/IND/R2/75* [AF204276]	IND75-A	639	575	0	89.98	10.02
3	O1/IND/53/79 [AF292107]	IND79A53	639	572	0	89.51	10.49
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	565	0	88.42	11.58
5	O1/SR/2/88 (DQ164899)	ISR88-02	639	559	0	87.48	12.52
6	O/MOR/1/91	MOR91-01	639	557	0	87.17	12.83
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	518	0	81.06	18.94
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
10	O1/BFS 1860/LJK/67 (J02185)	UKG67-A	639	516	0	80.75	19.25

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRL RefNo: EGY/1/2008 Sender Ref: VSVRI No. 4 Date collected: 01/01/2008 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 24/03/2009 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY08-01.SEQ Date sequence last updated: 27/03/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 10 days
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/10/2006	EGY06-10	639	639	0	100	0
2	O/EGY/11/2006	EGY06-11	639	639	0	100	0
3	O/EGY/4/2008	EGY08-04	639	639	0	100	0
4	O/EGY/3/2008	EGY08-03	639	637	0	99.69	0.31
5	O/EGY/5/2008	EGY08-05	639	637	0	99.69	0.31
6	O/EGY/6/2009	EGY09-06	639	637	0	99.69	0.31
7	O/EGY/7/2008	EGY08-07	639	637	0	99.69	0.31
8	O/EGY/8/2006	EGY06-08	639	637	0	99.69	0.31
9	O/EGY/8/2009	EGY09-08	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	634	0	99.22	0.78
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	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	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	592	0	92.64	7.36
2	O/IND/R2/75* [AF204276]	IND75-A	639	575	0	89.98	10.02
3	O/IND/53/79 [AF292107]	IND79A53	639	572	0	89.51	10.49
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	565	0	88.42	11.58
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	559	0	87.48	12.52
6	O/MOR/1/91	MOR91-01	639	557	0	87.17	12.83
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	518	0	81.06	18.94
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	516	0	80.75	19.25

nt, nucleotides
 *, not a WRLFMD reference number

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Serotype: O WRL Ref No: EGY/3/2008 Sender Ref: AHRI 3P1 C Date collected: 03/09/2008 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 24/03/2009 Species: Cattle Material used: BTy1 Region sequenced: VPI RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY08-03.SEQ Date sequence last updated: 27/03/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 10 days
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/5/2008	EGY08-05	639	639	0	100	0
2	O/EGY/6/2009	EGY09-06	639	639	0	100	0
3	O/EGY/7/2008	EGY08-07	639	639	0	100	0
4	O/EGY/8/2006	EGY06-08	639	639	0	100	0
5	O/EGY/8/2009	EGY09-08	639	639	0	100	0
6	O/EGY/1/2008	EGY08-01	639	637	0	99.69	0.31
7	O/EGY/10/2006	EGY06-10	639	637	0	99.69	0.31
8	O/EGY/11/2006	EGY06-11	639	637	0	99.69	0.31
9	O/EGY/4/2008	EGY08-04	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	636	0	99.53	0.47
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	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	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	594	0	92.96	7.04
2	O/IND/R2/75* [AF204276]	IND75-A	639	577	0	90.3	9.7
3	O/IND/53/79 [AF292107]	IND79A53	639	574	0	89.83	10.17
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	567	0	88.73	11.27
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	560	0	87.64	12.36
6	O/MOR/1/91	MOR91-01	639	558	0	87.32	12.68
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
9	O/PHI/5/95 (DQ164946)	PHI95-05	639	516	0	80.75	19.25
10	O1/BFS 1860/UK/67 (J02185)	UKG67-A	639	516	0	80.75	19.25

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRL RefNo: EGY/4/2008 Sender Ref: AHRI 4 S Date collected: 03/09/2008 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 31/03/2009 Species: Sheep Material used: RS2 Region sequenced: VPI RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY08-04.SEQ Date sequence last updated: 02/04/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 3 days
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/1/2008	EGY08-01	639	639	0	100	0
2	O/EGY/10/2006	EGY06-10	639	639	0	100	0
3	O/EGY/11/2006	EGY06-11	639	639	0	100	0
4	O/EGY/3/2008	EGY08-03	639	637	0	99.69	0.31
5	O/EGY/5/2008	EGY08-05	639	637	0	99.69	0.31
6	O/EGY/6/2009	EGY09-06	639	637	0	99.69	0.31
7	O/EGY/7/2008	EGY08-07	639	637	0	99.69	0.31
8	O/EGY/8/2006	EGY06-08	639	637	0	99.69	0.31
9	O/EGY/8/2009	EGY09-08	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	634	0	99.22	0.78
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	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	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	592	0	92.64	7.36
2	O1/IND/R2/75* [AF204276]	IND75-A	639	575	0	89.98	10.02
3	O1/IND/53/79 [AF292107]	IND79A53	639	572	0	89.51	10.49
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	565	0	88.42	11.58
5	O1/SR/2/88 (DQ164899)	ISR88-02	639	559	0	87.48	12.52
6	O/MOR/1/91	MOR91-01	639	557	0	87.17	12.83
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	518	0	81.06	18.94
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	516	0	80.75	19.25

nt, nucleotides
 *, not a WRLFMD reference number

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Serotype: O WRL Ref No: EGY/5/2008 Sender Ref: AHRI 4 P1 S Date collected: 03/09/2008 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 24/03/2009 Species: Sheep Material used: BTy1 Region sequenced: VPI RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY08-05.SEQ Date sequence last updated: 27/03/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 10 days
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/3/2008	EGY08-03	639	639	0	100	0
2	O/EGY/6/2009	EGY09-06	639	639	0	100	0
3	O/EGY/7/2008	EGY08-07	639	639	0	100	0
4	O/EGY/8/2006	EGY06-08	639	639	0	100	0
5	O/EGY/8/2009	EGY09-08	639	639	0	100	0
6	O/EGY/11/2008	EGY08-01	639	637	0	99.69	0.31
7	O/EGY/10/2006	EGY06-10	639	637	0	99.69	0.31
8	O/EGY/11/2006	EGY06-11	639	637	0	99.69	0.31
9	O/EGY/4/2008	EGY08-04	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	636	0	99.53	0.47
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72--A	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	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	594	0	92.96	7.04
2	O/IND/R2/75* [AF204276]	IND75--A	639	577	0	90.3	9.7
3	O/IND/53/79 [AF292107]	IND79A53	639	574	0	89.83	10.17
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	567	0	88.73	11.27
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	560	0	87.64	12.36
6	O/MOR/1/91	MOR91-01	639	558	0	87.32	12.68
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
9	O/PHI/5/95 (DQ164946)	PHI95-05	639	516	0	80.75	19.25
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	516	0	80.75	19.25

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRL RefNo: EGY/7/2008 Sender Ref: AHRI 1 P1 Date collected: 25/12/2008 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 24/03/2009 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY08-07.SEQ Date sequence last updated: 27/03/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 10 days
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/3/2008	EGY08-03	639	639	0	100	0
2	O/EGY/5/2008	EGY08-05	639	639	0	100	0
3	O/EGY/6/2009	EGY09-06	639	639	0	100	0
4	O/EGY/8/2006	EGY06-08	639	639	0	100	0
5	O/EGY/8/2009	EGY09-08	639	639	0	100	0
6	O/EGY/1/2008	EGY08-01	639	637	0	99.69	0.31
7	O/EGY/10/2006	EGY06-10	639	637	0	99.69	0.31
8	O/EGY/11/2006	EGY06-11	639	637	0	99.69	0.31
9	O/EGY/4/2008	EGY08-04	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	636	0	99.53	0.47
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	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	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	594	0	92.96	7.04
2	O/IND/R2/75* [AF204276]	IND75-A	639	577	0	90.3	9.7
3	O/IND/53/79 [AF292107]	IND79A53	639	574	0	89.83	10.17
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	567	0	88.73	11.27
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	560	0	87.64	12.36
6	O/MOR/1/91	MOR91-01	639	558	0	87.32	12.68
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
9	O/PHI/5/95 (DQ164946)	PHI95-05	639	516	0	80.75	19.25
10	O1/BFS 1860/UK/67 (J02185)	UKG67-A	639	516	0	80.75	19.25

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRL RefNo: EGY/1/2009 Sender Ref: VSVRI No. 3 Date collected: 01/01/2009 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 31/03/2009 Species: Not Given Material used: BTy1 Region sequenced: VPI RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY09-01.SEQ Date sequence last updated: 02/04/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 3 days
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Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	639	637	0	99.69	0.31
2	O/EGY/3/2008	EGY08-03	639	636	0	99.53	0.47
3	O/EGY/5/2008	EGY08-05	639	636	0	99.53	0.47
4	O/EGY/6/2009	EGY09-06	639	636	0	99.53	0.47
5	O/EGY/7/2008	EGY08-07	639	636	0	99.53	0.47
6	O/EGY/8/2006	EGY06-08	639	636	0	99.53	0.47
7	O/EGY/8/2009	EGY09-08	639	636	0	99.53	0.47
8	O/EGY/11/2008	EGY08-01	639	634	0	99.22	0.78
9	O/EGY/10/2006	EGY06-10	639	634	0	99.22	0.78
10	O/EGY/11/2006	EGY06-11	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	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	596	0	93.27	6.73
2	O/IND/R2/75* [AF204276]	IND75-A	639	579	0	90.61	9.39
3	O/IND/53/79 [AF292107]	IND79A53	639	575	0	89.98	10.02
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	569	0	89.05	10.95
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	560	0	87.64	12.36
6	O/MOR/1/91	MOR91-01	639	559	0	87.48	12.52
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	550	0	86.07	13.93
8	O1/BFS 1860/UK/67 (J02185)	UKG67-A	639	517	0	80.91	19.09
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
10	O/PHI/5/95 (DQ164946)	PHI95-05	639	515	0	80.59	19.41

nt, nucleotides
 *, not a WRLFMD reference number

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<p>Serotype: O WRL Ref No: EGY/6/2009 Sender Ref: AHRI 2 P1 Date collected: 22/01/2009 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 24/03/2009 Species: Cattle Material used: BTyl Region sequenced: VP1 RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639</p>	<p>Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY09-06.SEQ Date sequence last updated: 27/03/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 10 days</p>
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/3/2008	EGY08-03	639	639	0	100	0
2	O/EGY/5/2008	EGY08-05	639	639	0	100	0
3	O/EGY/7/2008	EGY08-07	639	639	0	100	0
4	O/EGY/8/2006	EGY06-08	639	639	0	100	0
5	O/EGY/8/2009	EGY09-08	639	639	0	100	0
6	O/EGY/11/2008	EGY08-01	639	637	0	99.69	0.31
7	O/EGY/10/2006	EGY06-10	639	637	0	99.69	0.31
8	O/EGY/11/2006	EGY06-11	639	637	0	99.69	0.31
9	O/EGY/4/2008	EGY08-04	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	636	0	99.53	0.47
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	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	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	594	0	92.96	7.04
2	O/IND/R2/75* [AF204276]	IND75-A	639	577	0	90.3	9.7
3	O/IND/53/79 [AF292107]	IND79A53	639	574	0	89.83	10.17
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	567	0	88.73	11.27
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	560	0	87.64	12.36
6	O/MOR/1/91	MOR91-01	639	558	0	87.32	12.68
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
9	O/PHI/5/95 (DQ164946)	PHI95-05	639	516	0	80.75	19.25
10	O1/BFS 1860/UK/67 (J02185)	UKG67-A	639	516	0	80.75	19.25

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRL RefNo: EGY/8/2009 Sender Ref: AHRI 4 P1 Date collected: 26/01/2009 Date received by WRLFMD: 19/03/2009 Date received for sequencing: 31/03/2009 Species: Cattle Material used: RS1 Region sequenced: VP1 RT-PCR primers: O1-1C244F/EUR-2B52R; O1-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 03/04/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: O1 Sharquia 72 Sequence filename: EGY09-08.SEQ Date sequence last updated: 02/04/2009 Total no. of comparisons: 1912 Min. no. of nt for comparison: 300 Total turn-around time: 15 days Sequencing time: 3 days
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Comments:

Eleven Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/EGY/3/2008	EGY08-03	639	639	0	100	0
2	O/EGY/5/2008	EGY08-05	639	639	0	100	0
3	O/EGY/6/2009	EGY09-06	639	639	0	100	0
4	O/EGY/7/2008	EGY08-07	639	639	0	100	0
5	O/EGY/8/2006	EGY06-08	639	639	0	100	0
6	O/EGY/1/2008	EGY08-01	639	637	0	99.69	0.31
7	O/EGY/10/2006	EGY06-10	639	637	0	99.69	0.31
8	O/EGY/11/2006	EGY06-11	639	637	0	99.69	0.31
9	O/EGY/4/2008	EGY08-04	639	637	0	99.69	0.31
10	O/EGY/1/2009	EGY09-01	639	636	0	99.53	0.47
11	O1/Sharquia/EGY/72 (DQ164871)	EGY72-A	639	634	0	99.22	0.78

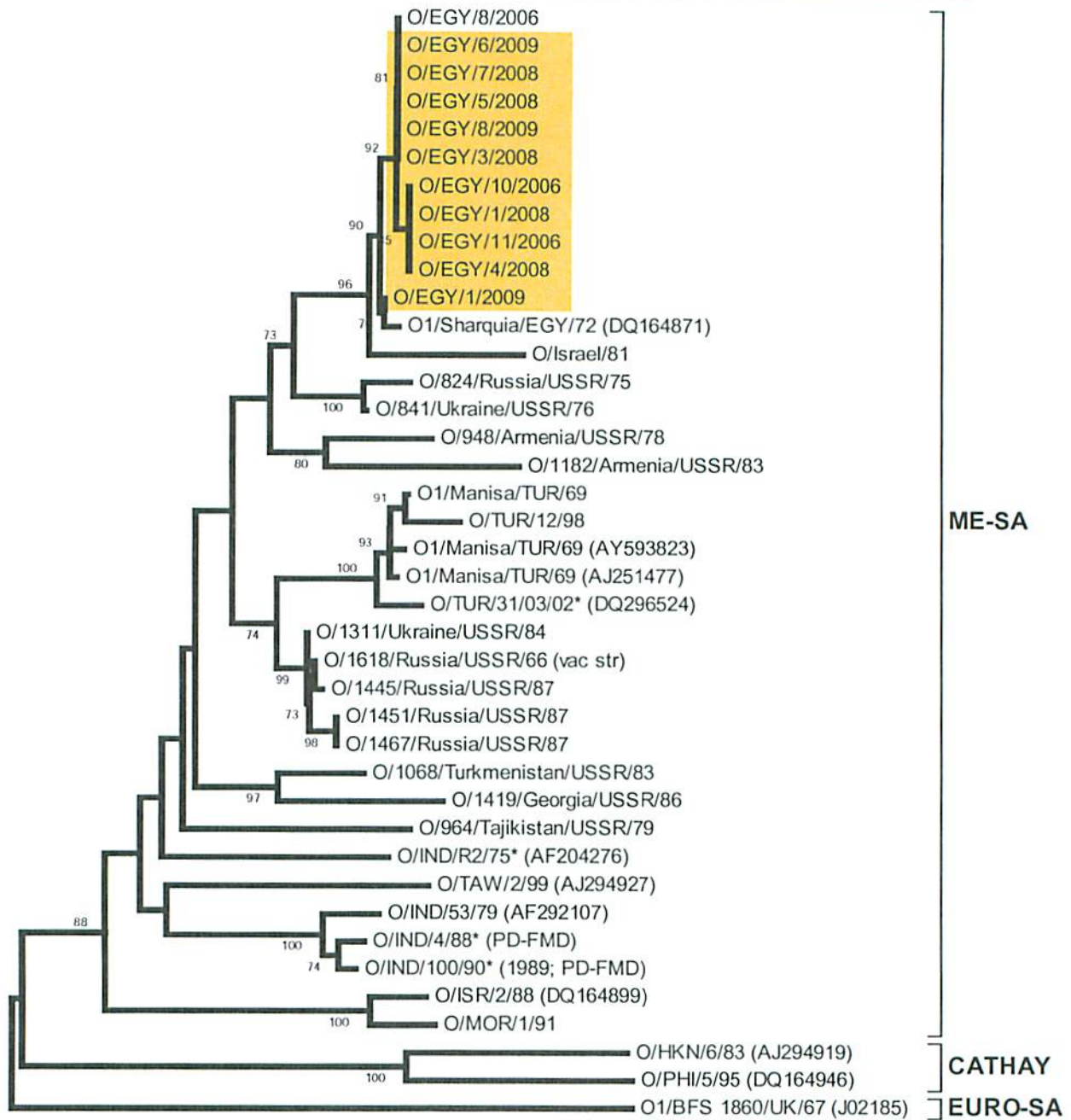
Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	594	0	92.96	7.04
2	O/IND/R2/75* [AF204276]	IND75-A	639	577	0	90.3	9.7
3	O/IND/53/79 [AF292107]	IND79A53	639	574	0	89.83	10.17
4	O/TAW/2/99 (AJ294927)	TAW99-02	639	567	0	88.73	11.27
5	O/SR/2/88 (DQ164899)	ISR88-02	639	560	0	87.64	12.36
6	O/MOR/1/91	MOR91-01	639	558	0	87.32	12.68
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	548	0	85.76	14.24
8	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
9	O/PHI/5/95 (DQ164946)	PHI95-05	639	516	0	80.75	19.25
10	O1/BFS 1860/UK/67 (J02185)	UKG67-A	639	516	0	80.75	19.25

nt, nucleotides
 *, not a WRLFMD reference number

Report on FMDV O from Egypt in 2006, 2008 & 2009

Batch: WRLFMD/2009/00012



Software: MEGA 4.0
No. of Taxa : 40
Data File : n:\evd\meg\db\fmdv\o\EGY2009a.meg
Data Title : O Egypt 2006, 2008 & 2009
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 and J. Wadsworth, 4 April 2009