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To:

Email:

To:

Email:

From:

Date: 30th March 2009

Subject: Sequencing Report

No. Of Pages: 4

FAX

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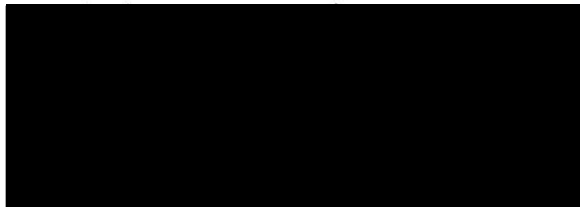
Thank you.

Dear [REDACTED]

Virus isolates: O IRN/7/2009 and O IRN/14/2009

Sequencing work has now been completed in respect of the above virus isolates received at IAH Pirbright on 26th of February 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/Picornaviridae/Aphthovirus/index.html

Yours sincerely



[REDACTED]
Head: World Reference Laboratory for FMD

Cc: [REDACTED]

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Molecular Epidemiology Report Form

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

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Serotype: O WRL Ref No: IRN/7/2009 Sender Ref: IR.87-13 503 Date collected: 2009 Date received by WRLFMD: 26/02/2009 Date received for sequencing: 10/03/2009 Species: Not known Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 26/03/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-07.SEQ Date sequence last updated: 26/03/2009 Total no. of comparisons: 1894 Min. no. of nt for comparison: 300 Total turn-around time: 28 days Sequencing time: 16 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	O/IRN/22/2007	IRN07-22	639	627	0	98.12	1.88
2	O/PAK/15/2007	PAK07-15	639	627	0	98.12	1.88
3	O/PAK/21/2007	PAK07-21	639	627	0	98.12	1.88
4	O/PAK/35/2005 (FJ798166)	PAK05-35	639	627	0	98.12	1.88
5	O/PAK/56/2007 (FJ798180)	PAK07-56	639	627	0	98.12	1.88
6	O/PAK/60/2006 (FJ798168)	PAK06-60	639	627	0	98.12	1.88
7	O/PAK/63/2006 (FJ798170)	PAK06-63	639	627	0	98.12	1.88
8	O/PAK/73/2006 (FJ798177)	PAK06-73	639	627	0	98.12	1.88
9	O/PAK/33/2005 (FJ798164)	PAK05-33	639	626	0	97.97	2.03
10	O/PAK/71/2006 (FJ798175)	PAK06-71	639	626	0	97.97	2.03

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	592	0	92.64	7.36
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	563	0	88.11	11.89
5	O/IND/R2/75* [AF204276]	IND75-A	639	560	0	87.64	12.36
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	549	0	85.92	14.08
7	O/MOR/1/91	MOR91-01	639	547	0	85.6	14.4
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	509	0	79.66	20.34

nt, nucleotides

*, not a WRLFMD reference number

Molecular Epidemiology Report Form

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Serotype: O WRL Ref No: IRN/14/2009 Sender Ref: IR.87-20 495 Date collected: 2009 Date received by WRLFMD: 26/02/2009 Date received for sequencing: 10/03/2009 Species: Not known Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 26/03/2009 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-14.SEQ Date sequence last updated: 26/03/2009 Total no. of comparisons: 1894 Min. no. of nt for comparison: 300 Total turn-around time: 28 days Sequencing time: 16 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	O/IRN/22/2007	IRN07-22	639	629	0	98.44	1.56
2	O/PAK/15/2007	PAK07-15	639	629	0	98.44	1.56
3	O/PAK/21/2007	PAK07-21	639	629	0	98.44	1.56
4	O/PAK/35/2005 (FJ798166)	PAK05-35	639	629	0	98.44	1.56
5	O/PAK/56/2007 (FJ798180)	PAK07-56	639	629	0	98.44	1.56
6	O/PAK/60/2006 (FJ798168)	PAK06-60	639	629	0	98.44	1.56
7	O/PAK/63/2006 (FJ798170)	PAK06-63	639	629	0	98.44	1.56
8	O/PAK/73/2006 (FJ798177)	PAK06-73	639	629	0	98.44	1.56
9	O/PAK/33/2005 (FJ798164)	PAK05-33	639	628	0	98.28	1.72
10	O/PAK/71/2006 (FJ798175)	PAK06-71	639	628	0	98.28	1.72

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99 (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/IND/R2/75* [AF204276]	IND75-A	639	563	0	88.11	11.89
4	O1/Manisa/TUR/69 (AJ251477)	TUR69-E	639	562	0	87.95	12.05
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	561	0	87.79	12.21
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	556	0	87.01	12.99
7	O/MOR/1/91	MOR91-01	639	554	0	86.7	13.3
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	524	0	82	18
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	513	0	80.28	19.72

nt, nucleotides
 *, not a WRLFMD reference number

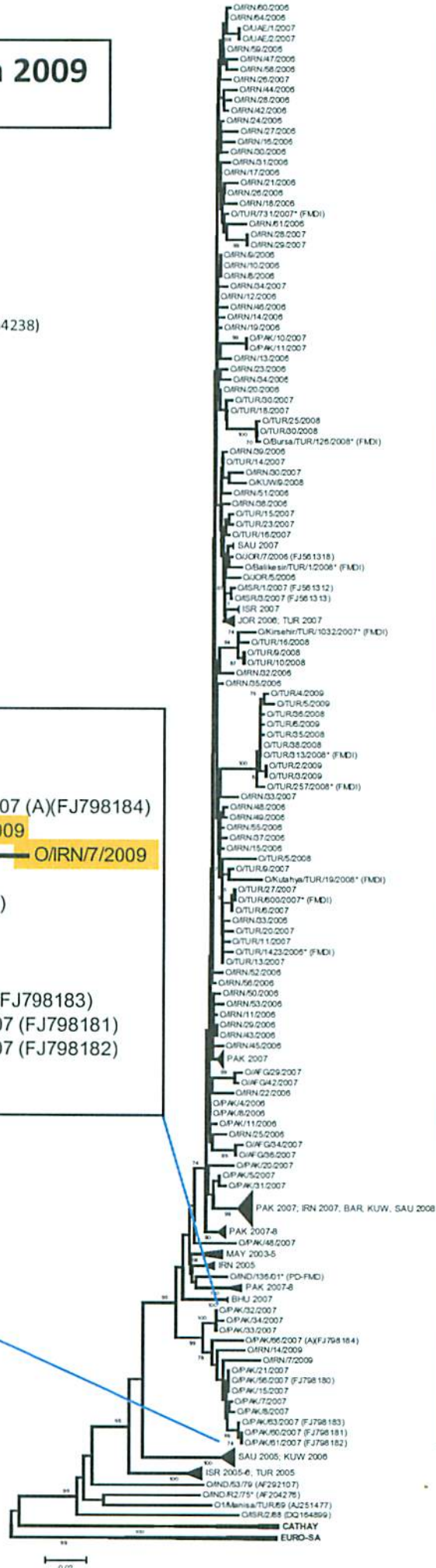
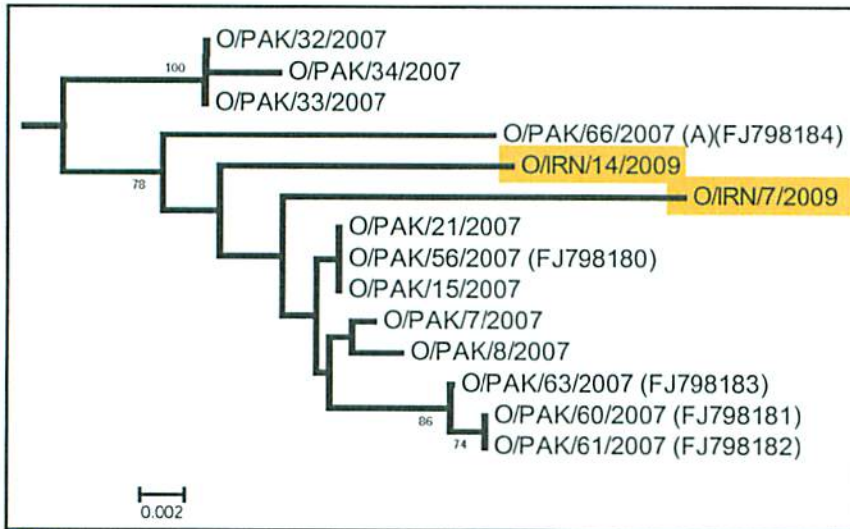
Report on FMDV O from Iran in 2009

Batch: WRLFMD/2009/00007

Software: MEGA 4.0
 No. of Taxa : 235
 Data File : n:\evd\meg\db\fmdv\o\tur2009a.meg
 Data Title : A Turkey & Iran 2008-9
 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, 29 March 2009



PanAsia-2
 PanAsia
 ME-SA