



INSTITUTE FOR ANIMAL HEALTH
Director: Professor Martin W. Shirley, PhD
PIRBRIGHT LABORATORY
Ash Road,
Pirbright,
Surrey,
GU24 0NF
Intn Tel: 00 44 1483 232441
Tel: 01483 232441 Fax: 01483 232621

FMD Sequencing Report

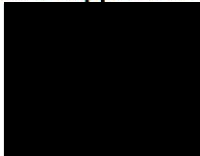
Lab Reference WRL Batch Number: WRLFMD/2010/00018
Sender Details: [REDACTED]
Date Received: [REDACTED]
Country of Origin: Iran
Date Reported: 21st May 2010

Dear Dr. Abdollah, Dr. Otard,

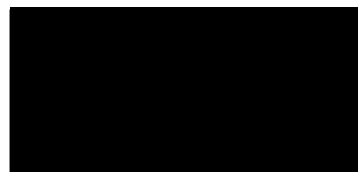
Re.: Serotype A.

Sequencing work has now been completed in respect of the samples you submitted and the details are as attached. Please note that all of our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Results Approved By:



Official Stamp:



Date: 21/05/2010



To help us improve the quality of our service, please send any suggestions or requests to the Reference Laboratory by fax (+44 (0) 1483 232621 or email: elizabeth.wilson@bbsrc.ac.uk)

FAO World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD)

Genotyping Report

Date: 20 May 2010

FMDV type O

Country: Iran

Period: 2010

No. of isolates: 18

BATCH: WRLFMD/2010/00018



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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/33/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-13	
Location: Farsan, Charhamahal, Iran	Topotype: ME-SA
Date collected: 15/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-33.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/IRN/34/2010	IRN10-34	639	639	0	100.00	0.00	ME-SA	PanAsia-2
3	O/IRN/37/2010	IRN10-37	639	639	0	100.00	0.00	ME-SA	PanAsia-2
4	O/IRN/38/2010	IRN10-38	639	639	0	100.00	0.00	ME-SA	PanAsia-2
5	O/IRN/39/2010	IRN10-39	639	639	0	100.00	0.00	ME-SA	PanAsia-2
6	O/IRN/15/2010	IRN10-15	639	638	0	99.84	0.16	ME-SA	PanAsia-2
7	O/IRN/19/2010	IRN10-19	639	638	0	99.84	0.16	ME-SA	PanAsia-2
8	O/IRN/27/2010	IRN10-27	639	638	0	99.84	0.16	ME-SA	PanAsia-2
9	O/IRN/30/2010	IRN10-30	639	638	0	99.84	0.16	ME-SA	PanAsia-2
10	O/IRN/4/2010	IRN10-04	639	638	0	99.84	0.16	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	607	0	94.99	5.01	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	586	0	91.71	8.29	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	571	1	89.50	10.50	ME-SA	Iran-2001
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	571	0	89.36	10.64	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c
8	O/IND/53/79 (AF292107)	IND79A53	639	567	0	88.73	11.27	ME-SA	unnamed
9	O/BHU/3/2009	BHU09-03	639	566	0	88.58	11.42	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/34/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-22	
Location: Arasanj, Boein Zahra, Qazvin, Iran	Topotype: ME-SA
Date collected: 15/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-34.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	639	0	100.00	0.00	ME-SA	PanAsia-2
3	O/IRN/37/2010	IRN10-37	639	639	0	100.00	0.00	ME-SA	PanAsia-2
4	O/IRN/38/2010	IRN10-38	639	639	0	100.00	0.00	ME-SA	PanAsia-2
5	O/IRN/39/2010	IRN10-39	639	639	0	100.00	0.00	ME-SA	PanAsia-2
6	O/IRN/15/2010	IRN10-15	639	638	0	99.84	0.16	ME-SA	PanAsia-2
7	O/IRN/19/2010	IRN10-19	639	638	0	99.84	0.16	ME-SA	PanAsia-2
8	O/IRN/27/2010	IRN10-27	639	638	0	99.84	0.16	ME-SA	PanAsia-2
9	O/IRN/30/2010	IRN10-30	639	638	0	99.84	0.16	ME-SA	PanAsia-2
10	O/IRN/4/2010	IRN10-04	639	638	0	99.84	0.16	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	607	0	94.99	5.01	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	586	0	91.71	8.29	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	571	1	89.50	10.50	ME-SA	Iran-2001
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	571	0	89.36	10.64	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c
8	O/IND/53/79 (AF292107)	IND79A53	639	567	0	88.73	11.27	ME-SA	unnamed
9	O/BHU/3/2009	BHU09-03	639	566	0	88.58	11.42	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/35/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-15	
Location: Falavarjan, Esfahan, Iran	Topotype: ME-SA
Date collected: 17/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-35.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/13/2010	IRN10-13	639	635	0	99.37	0.63	ME-SA	PanAsia-2
2	O/IRN/26/2010	IRN10-26	639	635	0	99.37	0.63	ME-SA	PanAsia-2
3	O/IRN/3/2010	IRN10-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2
4	O/IRN/30/2010	IRN10-30	639	635	0	99.37	0.63	ME-SA	PanAsia-2
5	O/IRN/4/2010	IRN10-04	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/IRN/50/2010	IRN10-50	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/PAK/3/2010	PAK10-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/PAK/4/2010	PAK10-04	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/11/2010	IRN10-11	639	634	0	99.22	0.78	ME-SA	PanAsia-2
10	O/IRN/2/2010	IRN10-02	639	634	0	99.22	0.78	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	606	0	94.84	5.16	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	585	0	91.55	8.45	ME-SA	PanAsia
3	O/IRN/61/2001 (DQ164896)	IRN01-61	638	572	1	89.66	10.34	ME-SA	Irn-2001
4	O/KUW/3/97 (DQ164904)	KUW97-03	639	572	0	89.51	10.49	ME-SA	Ind-2001a
5	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
6	O/PAK/16/2003 (DQ165068)	PAK03-16	639	571	0	89.36	10.64	ME-SA	Pak-98
7	O/UAE/4/2008	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c
8	O/BHU/3/2009	BHU09-03	639	564	0	88.26	11.74	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	564	0	88.26	11.74	ME-SA	unnamed
10	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/37/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-10	
Location: Birjand, South Khorasan, Iran	Topotype: ME-SA
Date collected: 27/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-37.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Sheep	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	639	0	100.00	0.00	ME-SA	PanAsia-2
3	O/IRN/34/2010	IRN10-34	639	639	0	100.00	0.00	ME-SA	PanAsia-2
4	O/IRN/38/2010	IRN10-38	639	639	0	100.00	0.00	ME-SA	PanAsia-2
5	O/IRN/39/2010	IRN10-39	639	639	0	100.00	0.00	ME-SA	PanAsia-2
6	O/IRN/15/2010	IRN10-15	639	638	0	99.84	0.16	ME-SA	PanAsia-2
7	O/IRN/19/2010	IRN10-19	639	638	0	99.84	0.16	ME-SA	PanAsia-2
8	O/IRN/27/2010	IRN10-27	639	638	0	99.84	0.16	ME-SA	PanAsia-2
9	O/IRN/30/2010	IRN10-30	639	638	0	99.84	0.16	ME-SA	PanAsia-2
10	O/IRN/4/2010	IRN10-04	639	638	0	99.84	0.16	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	607	0	94.99	5.01	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	586	0	91.71	8.29	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	571	1	89.50	10.50	ME-SA	Iran-2001
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	571	0	89.36	10.64	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c
8	O/IND/53/79 (AF292107)	IND79A53	639	567	0	88.73	11.27	ME-SA	unnamed
9	O/BHU/3/2009	BHU09-03	639	566	0	88.58	11.42	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/38/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-11	
Location: Birjand, South Khorasan, Iran	Topotype: ME-SA
Date collected: 27/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-38.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Sheep	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	639	0	100.00	0.00	ME-SA	PanAsia-2
3	O/IRN/34/2010	IRN10-34	639	639	0	100.00	0.00	ME-SA	PanAsia-2
4	O/IRN/37/2010	IRN10-37	639	639	0	100.00	0.00	ME-SA	PanAsia-2
5	O/IRN/39/2010	IRN10-39	639	639	0	100.00	0.00	ME-SA	PanAsia-2
6	O/IRN/15/2010	IRN10-15	639	638	0	99.84	0.16	ME-SA	PanAsia-2
7	O/IRN/19/2010	IRN10-19	639	638	0	99.84	0.16	ME-SA	PanAsia-2
8	O/IRN/27/2010	IRN10-27	639	638	0	99.84	0.16	ME-SA	PanAsia-2
9	O/IRN/30/2010	IRN10-30	639	638	0	99.84	0.16	ME-SA	PanAsia-2
10	O/IRN/4/2010	IRN10-04	639	638	0	99.84	0.16	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	607	0	94.99	5.01	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	586	0	91.71	8.29	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	571	1	89.50	10.50	ME-SA	Iran-2001
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	571	0	89.36	10.64	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c
8	O/IND/53/79 (AF292107)	IND79A53	639	567	0	88.73	11.27	ME-SA	unnamed
9	O/BHU/3/2009	BHU09-03	639	566	0	88.58	11.42	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/39/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-12	
Location: Ghaen, South Khorasan, Iran	Topotype: ME-SA
Date collected: 27/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-39.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Sheep	No. of Nt determined: 639
Material used: BTy2	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	639	0	100.00	0.00	ME-SA	PanAsia-2
3	O/IRN/34/2010	IRN10-34	639	639	0	100.00	0.00	ME-SA	PanAsia-2
4	O/IRN/37/2010	IRN10-37	639	639	0	100.00	0.00	ME-SA	PanAsia-2
5	O/IRN/38/2010	IRN10-38	639	639	0	100.00	0.00	ME-SA	PanAsia-2
6	O/IRN/15/2010	IRN10-15	639	638	0	99.84	0.16	ME-SA	PanAsia-2
7	O/IRN/19/2010	IRN10-19	639	638	0	99.84	0.16	ME-SA	PanAsia-2
8	O/IRN/27/2010	IRN10-27	639	638	0	99.84	0.16	ME-SA	PanAsia-2
9	O/IRN/30/2010	IRN10-30	639	638	0	99.84	0.16	ME-SA	PanAsia-2
10	O/IRN/4/2010	IRN10-04	639	638	0	99.84	0.16	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	607	0	94.99	5.01	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	586	0	91.71	8.29	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	571	1	89.50	10.50	ME-SA	Iran-2001
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	571	0	89.36	10.64	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c
8	O/IND/53/79 (AF292107)	IND79A53	639	567	0	88.73	11.27	ME-SA	unnamed
9	O/BHU/3/2009	BHU09-03	639	566	0	88.58	11.42	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/40/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-23	
Location: Arddg, Boein Zahra, Qazvin, Iran	Topotype: ME-SA
Date collected: 27/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-40.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	637	0	99.69	0.31	ME-SA	PanAsia-2
3	O/IRN/34/2010	IRN10-34	639	637	0	99.69	0.31	ME-SA	PanAsia-2
4	O/IRN/37/2010	IRN10-37	639	637	0	99.69	0.31	ME-SA	PanAsia-2
5	O/IRN/38/2010	IRN10-38	639	637	0	99.69	0.31	ME-SA	PanAsia-2
6	O/IRN/39/2010	IRN10-39	639	637	0	99.69	0.31	ME-SA	PanAsia-2
7	O/IRN/15/2010	IRN10-15	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/19/2010	IRN10-19	639	636	0	99.53	0.47	ME-SA	PanAsia-2
9	O/IRN/27/2010	IRN10-27	639	636	0	99.53	0.47	ME-SA	PanAsia-2
10	O/IRN/30/2010	IRN10-30	639	636	0	99.53	0.47	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	607	0	94.99	5.01	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	584	0	91.39	8.61	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	570	0	89.20	10.80	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	569	1	89.18	10.82	ME-SA	Irn-2001
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	569	0	89.05	10.95	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	568	0	88.89	11.11	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	564	0	88.68	11.32	ME-SA	Ind-2001c
8	O/IND/53/79 (AF292107)	IND79A53	639	565	0	88.42	11.58	ME-SA	unnamed
9	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed
10	O/BHU/3/2009	BHU09-03	639	564	0	88.26	11.74	ME-SA	Ind-2001d

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/41/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-4	
Location: Brojen, Chaharmahal, Iran	Topotype: ME-SA
Date collected: 28/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-41.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Sheep	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	636	0	99.53	0.47	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	636	0	99.53	0.47	ME-SA	PanAsia-2
3	O/IRN/34/2010	IRN10-34	639	636	0	99.53	0.47	ME-SA	PanAsia-2
4	O/IRN/37/2010	IRN10-37	639	636	0	99.53	0.47	ME-SA	PanAsia-2
5	O/IRN/38/2010	IRN10-38	639	636	0	99.53	0.47	ME-SA	PanAsia-2
6	O/IRN/39/2010	IRN10-39	639	636	0	99.53	0.47	ME-SA	PanAsia-2
7	O/UAE/4/2010	UAE10-04	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/15/2010	IRN10-15	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/19/2010	IRN10-19	639	635	0	99.37	0.63	ME-SA	PanAsia-2
10	O/IRN/27/2010	IRN10-27	639	635	0	99.37	0.63	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	604	0	94.52	5.48	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	583	0	91.24	8.76	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	571	0	89.36	10.64	ME-SA	Ind-2001b
4	O/PAK/16/2003 (DQ165068)	PAK03-16	639	570	0	89.20	10.80	ME-SA	Pak-98
5	O/IRN/61/2001 (DQ164896)	IRN01-61	638	569	1	89.18	10.82	ME-SA	Irn-2001
6	O/UAE/4/2008	UAE08-04	636	567	0	89.15	10.85	ME-SA	Ind-2001c
7	O/KUW/3/97 (DQ164904)	KUW97-03	639	569	0	89.05	10.95	ME-SA	Ind-2001a
8	O/BHU/3/2009	BHU09-03	639	565	0	88.42	11.58	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	565	0	88.42	11.58	ME-SA	unnamed
10	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/43/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-9	
Location: Basharoyen, South Khorasan, Iran	Topotype: ME-SA
Date collected: 30/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-43.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Goat	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	638	0	99.84	0.16	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	638	0	99.84	0.16	ME-SA	PanAsia-2
3	O/IRN/34/2010	IRN10-34	639	638	0	99.84	0.16	ME-SA	PanAsia-2
4	O/IRN/37/2010	IRN10-37	639	638	0	99.84	0.16	ME-SA	PanAsia-2
5	O/IRN/38/2010	IRN10-38	639	638	0	99.84	0.16	ME-SA	PanAsia-2
6	O/IRN/39/2010	IRN10-39	639	638	0	99.84	0.16	ME-SA	PanAsia-2
7	O/IRN/15/2010	IRN10-15	639	637	0	99.69	0.31	ME-SA	PanAsia-2
8	O/IRN/19/2010	IRN10-19	639	637	0	99.69	0.31	ME-SA	PanAsia-2
9	O/IRN/27/2010	IRN10-27	639	637	0	99.69	0.31	ME-SA	PanAsia-2
10	O/IRN/30/2010	IRN10-30	639	637	0	99.69	0.31	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	606	0	94.84	5.16	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	585	0	91.55	8.45	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	571	0	89.36	10.64	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	570	1	89.34	10.66	ME-SA	Irn-2001
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	570	0	89.20	10.80	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	569	0	89.05	10.95	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	565	0	88.84	11.16	ME-SA	Ind-2001c
8	O/IND/53/79 (AF292107)	IND79A53	639	566	0	88.58	11.42	ME-SA	unnamed
9	O/BHU/3/2009	BHU09-03	639	565	0	88.42	11.58	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	564	0	88.26	11.74	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/44/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-16	
Location: Gholpayeghan, Esfahan, Iran	Topotype: ME-SA
Date collected: 30/03/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-44.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Sheep	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/55/2010	IRN10-55	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/20/2010	IRN10-20	639	635	0	99.37	0.63	ME-SA	PanAsia-2
3	O/IRN/33/2010	IRN10-33	639	635	0	99.37	0.63	ME-SA	PanAsia-2
4	O/IRN/34/2010	IRN10-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
5	O/IRN/37/2010	IRN10-37	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/IRN/38/2010	IRN10-38	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/IRN/39/2010	IRN10-39	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/UAE/4/2010	UAE10-04	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/13/2010	IRN10-13	639	634	0	99.22	0.78	ME-SA	PanAsia-2
10	O/IRN/15/2010	IRN10-15	639	634	0	99.22	0.78	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	603	0	94.37	5.63	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	584	0	91.39	8.61	ME-SA	PanAsia
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	571	1	89.50	10.50	ME-SA	Irn-2001
5	O/UAE/4/2008	UAE08-04	636	568	0	89.31	10.69	ME-SA	Ind-2001c
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
7	O/PAK/16/2003 (DQ165068)	PAK03-16	639	568	0	88.89	11.11	ME-SA	Pak-98
8	O/BHU/3/2009	BHU09-03	639	564	0	88.26	11.74	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	563	0	88.11	11.89	ME-SA	unnamed
10	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/47/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-1	
Location: Righan, Kerman, Iran	Topotype: ME-SA
Date collected: 03/04/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-47.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Sheep/goat	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/30/2010	IRN10-30	639	636	0	99.53	0.47	ME-SA	PanAsia-2
2	O/IRN/4/2010	IRN10-04	639	636	0	99.53	0.47	ME-SA	PanAsia-2
3	O/PAK/3/2010	PAK10-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2
4	O/PAK/4/2010	PAK10-04	639	636	0	99.53	0.47	ME-SA	PanAsia-2
5	O/IRN/11/2010	IRN10-11	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/IRN/2/2010	IRN10-02	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/IRN/20/2010	IRN10-20	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/IRN/33/2010	IRN10-33	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/34/2010	IRN10-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
10	O/IRN/37/2010	IRN10-37	639	635	0	99.37	0.63	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	605	0	94.68	5.32	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	584	0	91.39	8.61	ME-SA	PanAsia
3	O/IRN/61/2001 (DQ164896)	IRN01-61	638	571	1	89.50	10.50	ME-SA	Irn-2001
4	O/OMN/7/2001 (DQ164941)	OMN01-07	639	569	0	89.05	10.95	ME-SA	Ind-2001b
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	569	0	89.05	10.95	ME-SA	Pak-98
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	567	0	88.73	11.27	ME-SA	Ind-2001a
7	O/UAE/4/2008	UAE08-04	636	563	0	88.52	11.48	ME-SA	Ind-2001c
8	O/BHU/3/2009	BHU09-03	639	565	0	88.42	11.58	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	563	0	88.11	11.89	ME-SA	unnamed
10	O/IND/R2/75* (AF204276)	IND75--A	639	562	0	87.95	12.05	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/48/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-2	
Location: Rafsanjan, Kerman, Iran	Topotype: ME-SA
Date collected: 03/04/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-48.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/26/2010	IRN10-26	639	633	0	99.06	0.94	ME-SA	PanAsia-2
2	O/IRN/50/2010	IRN10-50	639	633	0	99.06	0.94	ME-SA	PanAsia-2
3	O/IRN/3/2010	IRN10-03	639	629	0	98.44	1.56	ME-SA	PanAsia-2
4	O/IRN/30/2010	IRN10-30	639	629	0	98.44	1.56	ME-SA	PanAsia-2
5	O/IRN/35/2010	IRN10-35	639	629	0	98.44	1.56	ME-SA	PanAsia-2
6	O/IRN/4/2010	IRN10-04	639	629	0	98.44	1.56	ME-SA	PanAsia-2
7	O/PAK/3/2010	PAK10-03	639	629	0	98.44	1.56	ME-SA	PanAsia-2
8	O/PAK/4/2010	PAK10-04	639	629	0	98.44	1.56	ME-SA	PanAsia-2
9	O/IRN/11/2010	IRN10-11	639	628	0	98.28	1.72	ME-SA	PanAsia-2
10	O/IRN/2/2010	IRN10-02	639	628	0	98.28	1.72	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	600	0	93.90	6.10	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	579	0	90.61	9.39	ME-SA	PanAsia
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	568	0	88.89	11.11	ME-SA	Ind-2001a
4	O/OMN/7/2001 (DQ164941)	OMN01-07	639	568	0	88.89	11.11	ME-SA	Ind-2001b
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	567	0	88.73	11.27	ME-SA	Pak-98
6	O/UAE/4/2008	UAE08-04	636	563	0	88.52	11.48	ME-SA	Ind-2001c
7	O/IRN/61/2001 (DQ164896)	IRN01-61	638	564	1	88.40	11.60	ME-SA	Irn-2001
8	O/BHU/3/2009	BHU09-03	639	562	0	87.95	12.05	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	560	0	87.64	12.36	ME-SA	unnamed
10	O/IND/R2/75* (AF204276)	IND75--A	639	560	0	87.64	12.36	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/49/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-3	
Location: Bardsir, Kerman, Iran	Topotype: ME-SA
Date collected: 03/04/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-49.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/43/2010	IRN10-43	639	636	0	99.53	0.47	ME-SA	PanAsia-2
2	O/IRN/20/2010	IRN10-20	639	635	0	99.37	0.63	ME-SA	PanAsia-2
3	O/IRN/33/2010	IRN10-33	639	635	0	99.37	0.63	ME-SA	PanAsia-2
4	O/IRN/34/2010	IRN10-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
5	O/IRN/37/2010	IRN10-37	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/IRN/38/2010	IRN10-38	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/IRN/39/2010	IRN10-39	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/IRN/15/2010	IRN10-15	639	634	0	99.22	0.78	ME-SA	PanAsia-2
9	O/IRN/19/2010	IRN10-19	639	634	0	99.22	0.78	ME-SA	PanAsia-2
10	O/IRN/27/2010	IRN10-27	639	634	0	99.22	0.78	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	605	0	94.68	5.32	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	584	0	91.39	8.61	ME-SA	PanAsia
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
4	O/IRN/61/2001 (DQ164896)	IRN01-61	638	568	1	89.03	10.97	ME-SA	Iran-2001
5	O/OMN/7/2001 (DQ164941)	OMN01-07	639	568	0	88.89	11.11	ME-SA	Ind-2001b
6	O/PAK/16/2003 (DQ165068)	PAK03-16	639	567	0	88.73	11.27	ME-SA	Pak-98
7	O/IND/53/79 (AF292107)	IND79A53	639	565	0	88.42	11.58	ME-SA	unnamed
8	O/UAE/4/2008	UAE08-04	636	562	0	88.36	11.64	ME-SA	Ind-2001c
9	O/BHU/3/2009	BHU09-03	639	562	0	87.95	12.05	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	561	0	87.79	12.21	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/50/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-5	
Location: Anbarabad, Jiroft, Iran	Topotype: ME-SA
Date collected: 03/04/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-50.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/26/2010	IRN10-26	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/IRN/3/2010	IRN10-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2
3	O/IRN/30/2010	IRN10-30	639	635	0	99.37	0.63	ME-SA	PanAsia-2
4	O/IRN/35/2010	IRN10-35	639	635	0	99.37	0.63	ME-SA	PanAsia-2
5	O/IRN/4/2010	IRN10-04	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/PAK/3/2010	PAK10-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/PAK/4/2010	PAK10-04	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/IRN/11/2010	IRN10-11	639	634	0	99.22	0.78	ME-SA	PanAsia-2
9	O/IRN/2/2010	IRN10-02	639	634	0	99.22	0.78	ME-SA	PanAsia-2
10	O/IRN/20/2010	IRN10-20	639	634	0	99.22	0.78	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	606	0	94.84	5.16	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	583	0	91.24	8.76	ME-SA	PanAsia
3	O/IRN/61/2001 (DQ164896)	IRN01-61	638	570	1	89.34	10.66	ME-SA	Iran-2001
4	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
5	O/OMN/7/2001 (DQ164941)	OMN01-07	639	570	0	89.20	10.80	ME-SA	Ind-2001b
6	O/PAK/16/2003 (DQ165068)	PAK03-16	639	570	0	89.20	10.80	ME-SA	Pak-98
7	O/UAE/4/2008	UAE08-04	636	564	0	88.68	11.32	ME-SA	Ind-2001c
8	O/BHU/3/2009	BHU09-03	639	564	0	88.26	11.74	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	564	0	88.26	11.74	ME-SA	unnamed
10	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/51/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-17	
Location: Gholpayeghan, Esfahan, Iran	Topotype: ME-SA
Date collected: 03/04/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-51.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/20/2010	IRN10-20	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/33/2010	IRN10-33	639	637	0	99.69	0.31	ME-SA	PanAsia-2
3	O/IRN/34/2010	IRN10-34	639	637	0	99.69	0.31	ME-SA	PanAsia-2
4	O/IRN/37/2010	IRN10-37	639	637	0	99.69	0.31	ME-SA	PanAsia-2
5	O/IRN/38/2010	IRN10-38	639	637	0	99.69	0.31	ME-SA	PanAsia-2
6	O/IRN/39/2010	IRN10-39	639	637	0	99.69	0.31	ME-SA	PanAsia-2
7	O/IRN/15/2010	IRN10-15	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/17/2010	IRN10-17	639	636	0	99.53	0.47	ME-SA	PanAsia-2
9	O/IRN/19/2010	IRN10-19	639	636	0	99.53	0.47	ME-SA	PanAsia-2
10	O/IRN/27/2010	IRN10-27	639	636	0	99.53	0.47	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	605	0	94.68	5.32	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	584	0	91.39	8.61	ME-SA	PanAsia
3	O/PAK/16/2003 (DQ165068)	PAK03-16	639	571	0	89.36	10.64	ME-SA	Pak-98
4	O/OMN/7/2001 (DQ164941)	OMN01-07	639	570	0	89.20	10.80	ME-SA	Ind-2001b
5	O/IRN/61/2001 (DQ164896)	IRN01-61	638	569	1	89.18	10.82	ME-SA	Irn-2001
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	568	0	88.89	11.11	ME-SA	Ind-2001a
7	O/IND/53/79 (AF292107)	IND79A53	639	567	0	88.73	11.27	ME-SA	unnamed
8	O/UAE/4/2008	UAE08-04	636	564	0	88.68	11.32	ME-SA	Ind-2001c
9	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed
10	O/BHU/3/2009	BHU09-03	639	564	0	88.26	11.74	ME-SA	Ind-2001d

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/52/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-20	
Location: Qom, Qom, Iran	Topotype: ME-SA
Date collected: 03/04/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-52.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/11/2010	IRN10-11	639	634	0	99.22	0.78	ME-SA	PanAsia-2
2	O/IRN/2/2010	IRN10-02	639	634	0	99.22	0.78	ME-SA	PanAsia-2
3	O/IRN/31/2010	IRN10-31	639	634	0	99.22	0.78	ME-SA	PanAsia-2
4	O/IRN/12/2010	IRN10-12	639	633	0	99.06	0.94	ME-SA	PanAsia-2
5	O/IRN/13/2010	IRN10-13	639	633	0	99.06	0.94	ME-SA	PanAsia-2
6	O/IRN/30/2010	IRN10-30	639	633	0	99.06	0.94	ME-SA	PanAsia-2
7	O/IRN/4/2010	IRN10-04	639	633	0	99.06	0.94	ME-SA	PanAsia-2
8	O/PAK/3/2010	PAK10-03	639	633	0	99.06	0.94	ME-SA	PanAsia-2
9	O/PAK/4/2010	PAK10-04	639	633	0	99.06	0.94	ME-SA	PanAsia-2
10	O/IRN/20/2010	IRN10-20	639	632	0	98.90	1.10	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	604	0	94.52	5.48	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	585	0	91.55	8.45	ME-SA	PanAsia
3	O/IRN/61/2001 (DQ164896)	IRN01-61	638	572	1	89.66	10.34	ME-SA	Irn-2001
4	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
5	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
6	O/PAK/16/2003 (DQ165068)	PAK03-16	639	569	0	89.05	10.95	ME-SA	Pak-98
7	O/UAE/4/2008	UAE08-04	636	564	0	88.68	11.32	ME-SA	Ind-2001c
8	O/BHU/3/2009	BHU09-03	639	564	0	88.26	11.74	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	564	0	88.26	11.74	ME-SA	unnamed
10	O/IND/R2/75* (AF204276)	IND75--A	639	561	0	87.79	12.21	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/54/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-18	
Location: Gholpayeghan, Esfahan, Iran	Topotype: ME-SA
Date collected: 04/04/2010	Genotype/strain: PanAsia-2
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-54.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/10/2010	IRN10-10	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/8/2010	IRN10-08	639	636	0	99.53	0.47	ME-SA	PanAsia-2
3	O/IRN/31/2009	IRN09-31	639	630	0	98.59	1.41	ME-SA	PanAsia-2
4	O/IRN/51/2009	IRN09-51	639	630	0	98.59	1.41	ME-SA	PanAsia-2
5	O/IRN/60/2009	IRN09-60	639	630	0	98.59	1.41	ME-SA	PanAsia-2
6	O/SAU/1/2009	SAU09-01	639	630	0	98.59	1.41	ME-SA	PanAsia-2
7	O/SAU/2/2009	SAU09-02	639	630	0	98.59	1.41	ME-SA	PanAsia-2
8	O/IRN/41/2009	IRN09-41	639	629	0	98.44	1.56	ME-SA	PanAsia-2
9	O/IRN/42/2009	IRN09-42	639	629	0	98.44	1.56	ME-SA	PanAsia-2
10	O/IRN/43/2009	IRN09-43	639	629	0	98.44	1.56	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	606	0	94.84	5.16	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	592	0	92.64	7.36	ME-SA	PanAsia
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	579	0	90.61	9.39	ME-SA	Ind-2001a
4	O/OMN/7/2001 (DQ164941)	OMN01-07	639	577	0	90.30	9.70	ME-SA	Ind-2001b
5	O/IRN/61/2001 (DQ164896)	IRN01-61	638	574	1	89.97	10.03	ME-SA	Irn-2001
6	O/BHU/3/2009	BHU09-03	639	573	0	89.67	10.33	ME-SA	Ind-2001d
7	O/UAE/4/2008	UAE08-04	636	570	0	89.62	10.38	ME-SA	Ind-2001c
8	O/PAK/16/2003 (DQ165068)	PAK03-16	639	570	0	89.20	10.80	ME-SA	Pak-98
9	O/IND/53/79 (AF292107)	IND79A53	639	564	0	88.26	11.74	ME-SA	unnamed
10	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	564	0	88.26	11.74	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: O	Report date: 20/05/2010
WRLFMD Ref No: IRN/55/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00018	Checked by: D.P. King
Sender Ref: IR-89-19	
Location: Jafareyh, Qom, Iran	Topotype: ME-SA
Date collected: 04/04/2010	Genotype/strain: Unnamed
Date received by WRLFMD: 21/04/2010	Sequence filename: IRN10-55.SEQ
Date received for sequencing: 17/05/2010	Date sequence last updated: 19/05/2010
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2408
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 29 days
	Sequencing time: 3 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/44/2010	IRN10-44	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/20/2010	IRN10-20	639	635	0	99.37	0.63	ME-SA	PanAsia-2
3	O/IRN/33/2010	IRN10-33	639	635	0	99.37	0.63	ME-SA	PanAsia-2
4	O/IRN/34/2010	IRN10-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
5	O/IRN/37/2010	IRN10-37	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/IRN/38/2010	IRN10-38	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/IRN/39/2010	IRN10-39	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/UAE/4/2010	UAE10-04	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/13/2010	IRN10-13	639	634	0	99.22	0.78	ME-SA	PanAsia-2
10	O/IRN/15/2010	IRN10-15	639	634	0	99.22	0.78	ME-SA	PanAsia-2
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/IRN/8/2005	IRN05-08	639	603	0	94.37	5.63	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	586	0	91.71	8.29	ME-SA	PanAsia
3	O/IRN/61/2001 (DQ164896)	IRN01-61	638	573	1	89.81	10.19	ME-SA	Irn-2001
4	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b
5	O/UAE/4/2008	UAE08-04	636	568	0	89.31	10.69	ME-SA	Ind-2001c
6	O/KUW/3/97 (DQ164904)	KUW97-03	639	570	0	89.20	10.80	ME-SA	Ind-2001a
7	O/PAK/16/2003 (DQ165068)	PAK03-16	639	568	0	88.89	11.11	ME-SA	Pak-98
8	O/IND/53/79 (AF292107)	IND79A53	639	565	0	88.42	11.58	ME-SA	unnamed
9	O/BHU/3/2009	BHU09-03	639	564	0	88.26	11.74	ME-SA	Ind-2001d
10	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v3.1

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Report on FMDV O in Iran in 2010

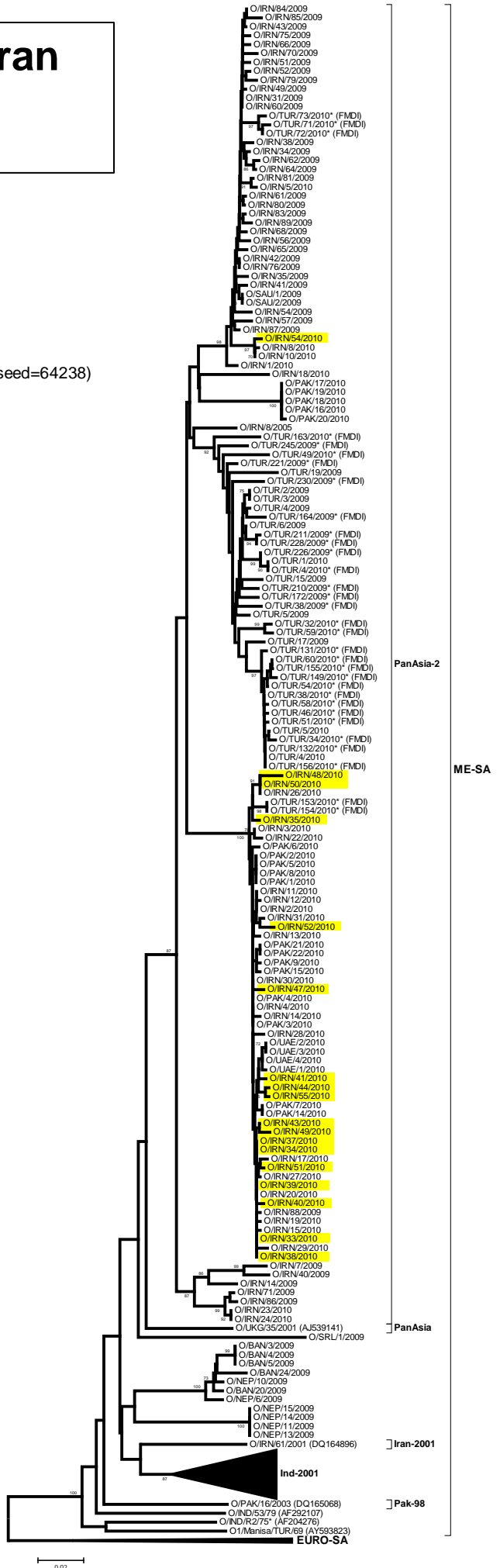
Batch: WRLFMD/2010/00018

Software: MEGA 4.0
 No. of Taxa : 212
 Data File : n:\evd\meg\db\fmvd\o\IRN2010b.meg
 Data Title : O Iran 2010
 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 & J. Wadsworth, 20 May 2010

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