

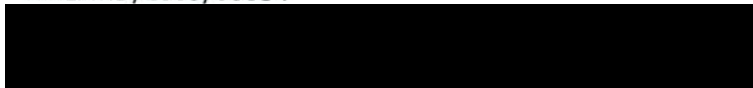


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FMD Sequencing Report

Lab Reference WRL Batch Number: WRLFMD/2009/00054


Sender Details:



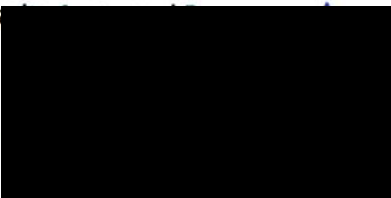
Date Received: 4th December 2009

Country of Origin: Iran

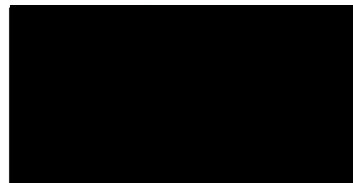
Date Reported: 2nd February 2010

Dear 

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/>

Res 

Official Stamp:



Date: 2/2/10



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)

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/49/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-69A Location: S.M., Tonekabon, Mazandaran, Iran Date collected: 16/07/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-49.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	638	0	99.84	0.16	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	638	0	99.84	0.16	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	637	0	99.69	0.31	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	637	0	99.69	0.31	ME-SA	PanAsia-2
5	O/IRN/61/2009	IRN09-61	639	637	0	99.69	0.31	ME-SA	PanAsia-2
6	O/IRN/76/2009	IRN09-76	639	637	0	99.69	0.31	ME-SA	PanAsia-2
7	O/IRN/34/2009	IRN09-34	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/35/2009	IRN09-35	639	636	0	99.53	0.47	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	636	0	99.53	0.47	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	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	610	0	95.46	4.54	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	596	0	93.27	6.73	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	569	0	89.05	10.95	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	564	0	88.26	11.74	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	563	0	88.11	11.89	ME-SA	unnamed
6	O/ETH/1/2007 (FJ798137)	ETH07-01	639	553	0	86.54	13.46	EA-3	unnamed
7	O/TAI/189/87* (TRRL)	TAI87-AC	639	553	0	86.54	13.46	SEA	unnamed
8	O/K40/84*	KEN84-40	639	551	0	86.23	13.77	EA-1	unnamed
9	O/SUD/2/86 (DQ165075)	SUD86-02	639	549	0	85.92	14.08	EA-3	unnamed
10	O/ETH/3/2004 (FJ798109)	ETH04-03	639	548	0	85.76	14.24	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O	Report date: 29/01/2010
WRLFMD Ref No: IRN/51/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2009/00054	Checked by: D.P. King
Sender Ref: IR-88-73	
Location: Maishhad, Razar, Khorasan, Iran	Topotype: ME-SA
Date collected: 19/07/2009	Genotype/strain: PanAsia-2
Date received by WRLFMD: 04/12/2009	Sequence filename: IRN09-51.SEQ
Date received for sequencing: 12/01/2010	Date sequence last updated: 18/01/2010
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: 2224
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 56 days
	Sequencing time: 17 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/31/2009	IRN09-31	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	637	0	99.69	0.31	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	636	0	99.53	0.47	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	636	0	99.53	0.47	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	636	0	99.53	0.47	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	636	0	99.53	0.47	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/52/2009	IRN09-52	639	635	0	99.37	0.63	ME-SA	PanAsia-2
10	O/IRN/66/2009	IRN09-66	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	609	0	95.31	4.69	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	595	0	93.11	6.89	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	562	0	87.95	12.05	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	552	0	86.38	13.62	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	550	0	86.07	13.93	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	550	0	86.07	13.93	EA-1	unnamed
9	O/KEN/5/2002 (DQ165073)	KEN02-05	639	546	0	85.45	14.55	EA-2	unnamed
10	O/MYA/7/98 (DQ164925)	MYA98-07	639	546	0	85.45	14.55	SEA	Mya-98
nt, nucleotides									
*, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/52/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-54 Location: Ghal Khaton, Chenaran, Kharasan Razavi, Iran Date collected: 20/07/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Sheep Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-52.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	637	0	99.69	0.31	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	636	0	99.53	0.47	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	636	0	99.53	0.47	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	636	0	99.53	0.47	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	636	0	99.53	0.47	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	635	0	99.37	0.63	ME-SA	PanAsia-2
10	O/IRN/66/2009	IRN09-66	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	609	0	95.31	4.69	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	595	0	93.11	6.89	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	562	0	87.95	12.05	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	552	0	86.38	13.62	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	550	0	86.07	13.93	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	550	0	86.07	13.93	EA-1	unnamed
9	O/MYA/7/98 (DQ164925)	MYA98-07	639	546	0	85.45	14.55	SEA	Mya-98
10	O/SUD/2/86 (DQ165075)	SUD86-02	639	546	0	85.45	14.55	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/54/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-46 Location: Rostami, Aliabad, Khalkhel, Iran Date collected: 23/07/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-54.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	634	0	99.22	0.78	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	634	0	99.22	0.78	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	633	0	99.06	0.94	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	633	0	99.06	0.94	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	633	0	99.06	0.94	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	633	0	99.06	0.94	ME-SA	PanAsia-2
7	O/IRN/68/2009	IRN09-68	639	633	0	99.06	0.94	ME-SA	PanAsia-2
8	O/IRN/76/2009	IRN09-76	639	633	0	99.06	0.94	ME-SA	PanAsia-2
9	O/IRN/34/2009	IRN09-34	639	632	0	98.9	1.1	ME-SA	PanAsia-2
10	O/IRN/51/2009	IRN09-51	639	632	0	98.9	1.1	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	609	0	95.31	4.69	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	597	0	93.43	6.57	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	566	0	88.58	11.42	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	561	0	87.79	12.21	ME-SA	unnamed
6	O/ETH/1/2007 (FJ798137)	ETH07-01	639	553	0	86.54	13.46	EA-3	unnamed
7	O/TAI/189/87* (TRRL)	TAI87-AC	639	553	0	86.54	13.46	SEA	unnamed
8	O/K40/84*	KEN84-40	639	551	0	86.23	13.77	EA-1	unnamed
9	O/SUD/2/86 (DQ165075)	SUD86-02	639	548	0	85.76	14.24	EA-3	unnamed
10	O/KEN/5/2002 (DQ165073)	KEN02-05	639	547	0	85.6	14.4	EA-2	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/56/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-61 Location: Hor, Mobarekeh, Esfahan, Iran Date collected: 25/07/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-56.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	636	0	99.53	0.47	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	636	0	99.53	0.47	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	635	0	99.37	0.63	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	635	0	99.37	0.63	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	634	0	99.22	0.78	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	634	0	99.22	0.78	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	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	609	0	95.31	4.69	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	595	0	93.11	6.89	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	570	0	89.2	10.8	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	564	0	88.26	11.74	ME-SA	unnamed
6	O/K40/84*	KEN84-40	639	553	0	86.54	13.46	EA-1	unnamed
7	O/TAI/189/87* (TRRL)	TAI87-AC	639	553	0	86.54	13.46	SEA	unnamed
8	O/ETH/1/2007 (FJ798137)	ETH07-01	639	551	0	86.23	13.77	EA-3	unnamed
9	O/ETH/3/2004 (FJ798109)	ETH04-03	639	548	0	85.76	14.24	EA-3	unnamed
10	O/KEN/5/2002 (DQ165073)	KEN02-05	639	548	0	85.76	14.24	EA-2	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/57/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-47 Location: Aydbi, Mehkz, Yazd, Iran Date collected: 27/07/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Sheep Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-57.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	633	0	99.06	0.94	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	633	0	99.06	0.94	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	632	0	98.9	1.1	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	632	0	98.9	1.1	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	632	0	98.9	1.1	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	632	0	98.9	1.1	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	632	0	98.9	1.1	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	631	0	98.75	1.25	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	631	0	98.75	1.25	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	639	631	0	98.75	1.25	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	595	0	93.11	6.89	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	564	0	88.26	11.74	ME-SA	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	554	0	86.7	13.3	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	552	0	86.38	13.62	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	550	0	86.07	13.93	EA-1	unnamed
9	O/MYA/7/98 (DQ164925)	MYA98-07	639	550	0	86.07	13.93	SEA	Mya-98
10	O/SUD/2/86 (DQ165075)	SUD86-02	639	548	0	85.76	14.24	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/60/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-74 Location: Ali, Kahak, Qom, Iran Date collected: 27/07/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Not Known Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-60.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	639	0	100	0	ME-SA	PanAsia-2
2	O/IRN/42/2009	IRN09-42	639	638	0	99.84	0.16	ME-SA	PanAsia-2
3	O/IRN/43/2009	IRN09-43	639	638	0	99.84	0.16	ME-SA	PanAsia-2
4	O/IRN/49/2009	IRN09-49	639	638	0	99.84	0.16	ME-SA	PanAsia-2
5	O/IRN/61/2009	IRN09-61	639	638	0	99.84	0.16	ME-SA	PanAsia-2
6	O/IRN/76/2009	IRN09-76	639	638	0	99.84	0.16	ME-SA	PanAsia-2
7	O/IRN/34/2009	IRN09-34	639	637	0	99.69	0.31	ME-SA	PanAsia-2
8	O/IRN/51/2009	IRN09-51	639	637	0	99.69	0.31	ME-SA	PanAsia-2
9	O/IRN/52/2009	IRN09-52	639	637	0	99.69	0.31	ME-SA	PanAsia-2
10	O/IRN/66/2009	IRN09-66	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	611	0	95.62	4.38	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	597	0	93.43	6.57	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	570	0	89.2	10.8	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	564	0	88.26	11.74	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	554	0	86.7	13.3	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	552	0	86.38	13.62	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	552	0	86.38	13.62	EA-1	unnamed
9	O/MYA/7/98 (DQ164925)	MYA98-07	639	548	0	85.76	14.24	SEA	Mya-98
10	O/SUD/2/86 (DQ165075)	SUD86-02	639	548	0	85.76	14.24	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/61/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-49 Location: Rasali, Takestan, Qazvin, Iran Date collected: 28/07/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-61.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	638	0	99.84	0.16	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	638	0	99.84	0.16	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	637	0	99.69	0.31	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	637	0	99.69	0.31	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	637	0	99.69	0.31	ME-SA	PanAsia-2
6	O/IRN/76/2009	IRN09-76	639	637	0	99.69	0.31	ME-SA	PanAsia-2
7	O/IRN/34/2009	IRN09-34	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/51/2009	IRN09-51	639	636	0	99.53	0.47	ME-SA	PanAsia-2
9	O/IRN/52/2009	IRN09-52	639	636	0	99.53	0.47	ME-SA	PanAsia-2
10	O/IRN/66/2009	IRN09-66	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	610	0	95.46	4.54	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	596	0	93.27	6.73	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	569	0	89.05	10.95	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	564	0	88.26	11.74	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	563	0	88.11	11.89	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	553	0	86.54	13.46	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	551	0	86.23	13.77	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	551	0	86.23	13.77	EA-1	unnamed
9	O/MYA/7/98 (DQ164925)	MYA98-07	639	547	0	85.6	14.4	SEA	Mya-98
10	O/SUD/2/86 (DQ165075)	SUD86-02	639	547	0	85.6	14.4	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O	Report date: 29/01/2010
WRLFMD Ref No: IRN/62/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2009/00054	Checked by: D.P. King
Sender Ref: IR-88-48	
Location: Hossanabad, B. Z., Qazvin, Iran	Topotype: ME-SA
Date collected: 02/08/2009	Genotype/strain: PanAsia-2
Date received by WRLFMD: 04/12/2009	Sequence filename: IRN09-62.SEQ
Date received for sequencing: 12/01/2010	Date sequence last updated: 18/01/2010
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: 2224
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 56 days
	Sequencing time: 17 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/64/2009	IRN09-64	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/34/2009	IRN09-34	639	634	0	99.22	0.78	ME-SA	PanAsia-2
3	O/IRN/31/2009	IRN09-31	639	632	0	98.9	1.1	ME-SA	PanAsia-2
4	O/IRN/60/2009	IRN09-60	639	632	0	98.9	1.1	ME-SA	PanAsia-2
5	O/IRN/38/2009	IRN09-38	639	631	0	98.75	1.25	ME-SA	PanAsia-2
6	O/IRN/42/2009	IRN09-42	639	631	0	98.75	1.25	ME-SA	PanAsia-2
7	O/IRN/43/2009	IRN09-43	639	631	0	98.75	1.25	ME-SA	PanAsia-2
8	O/IRN/49/2009	IRN09-49	639	631	0	98.75	1.25	ME-SA	PanAsia-2
9	O/IRN/61/2009	IRN09-61	639	631	0	98.75	1.25	ME-SA	PanAsia-2
10	O/IRN/65/2009	IRN09-65	639	631	0	98.75	1.25	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/IND/53/79 (AF292107)	IND79A53	639	566	0	88.58	11.42	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	562	0	87.95	12.05	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	552	0	86.38	13.62	SEA	unnamed
7	O/K40/84*	KEN84-40	639	549	0	85.92	14.08	EA-1	unnamed
8	O/ETH/1/2007 (FJ798137)	ETH07-01	639	547	0	85.6	14.4	EA-3	unnamed
9	O/SUD/2/86 (DQ165075)	SUD86-02	639	545	0	85.29	14.71	EA-3	unnamed
10	O/ETH/3/2004 (FJ798109)	ETH04-03	639	544	0	85.13	14.87	EA-3	unnamed
nt, nucleotides									
*, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/64/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-75 Location: Pour, Qom, Iran Date collected: 03/08/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-64.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/62/2009	IRN09-62	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/34/2009	IRN09-34	639	636	0	99.53	0.47	ME-SA	PanAsia-2
3	O/IRN/31/2009	IRN09-31	639	634	0	99.22	0.78	ME-SA	PanAsia-2
4	O/IRN/60/2009	IRN09-60	639	634	0	99.22	0.78	ME-SA	PanAsia-2
5	O/IRN/38/2009	IRN09-38	639	633	0	99.06	0.94	ME-SA	PanAsia-2
6	O/IRN/42/2009	IRN09-42	639	633	0	99.06	0.94	ME-SA	PanAsia-2
7	O/IRN/43/2009	IRN09-43	639	633	0	99.06	0.94	ME-SA	PanAsia-2
8	O/IRN/49/2009	IRN09-49	639	633	0	99.06	0.94	ME-SA	PanAsia-2
9	O/IRN/61/2009	IRN09-61	639	633	0	99.06	0.94	ME-SA	PanAsia-2
10	O/IRN/65/2009	IRN09-65	639	633	0	99.06	0.94	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	608	0	95.15	4.85	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	594	0	92.96	7.04	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	562	0	87.95	12.05	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	554	0	86.7	13.3	SEA	unnamed
7	O/K40/84*	KEN84-40	639	550	0	86.07	13.93	EA-1	unnamed
8	O/ETH/1/2007 (FJ798137)	ETH07-01	639	549	0	85.92	14.08	EA-3	unnamed
9	O/SUD/2/86 (DQ165075)	SUD86-02	639	547	0	85.6	14.4	EA-3	unnamed
10	O/MYA/7/98 (DQ164925)	MYA98-07	639	546	0	85.45	14.55	SEA	Mya-98
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/65/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-68 Location: Heydr, Trabjdgh, Minodesht, Gholestan, Iran Date collected: 24/08/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Sheep Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-65.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	636	0	99.53	0.47	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	636	0	99.53	0.47	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	635	0	99.37	0.63	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	635	0	99.37	0.63	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	635	0	99.37	0.63	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	635	0	99.37	0.63	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	635	0	99.37	0.63	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	634	0	99.22	0.78	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	634	0	99.22	0.78	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	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	612	0	95.77	4.23	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	596	0	93.27	6.73	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	569	0	89.05	10.95	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	564	0	88.26	11.74	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	563	0	88.11	11.89	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	554	0	86.7	13.3	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	551	0	86.23	13.77	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	551	0	86.23	13.77	EA-1	unnamed
9	O/SUD/2/86 (DQ165075)	SUD86-02	639	547	0	85.6	14.4	EA-3	unnamed
10	O/ETH/3/2004 (FJ798109)	ETH04-03	639	546	0	85.45	14.55	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/66/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-67 Location: Rajah, G. K., Gholstan, Iran Date collected: 26/08/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Not Known Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-66.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	637	0	99.69	0.31	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	636	0	99.53	0.47	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	636	0	99.53	0.47	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	636	0	99.53	0.47	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	636	0	99.53	0.47	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	635	0	99.37	0.63	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	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	609	0	95.31	4.69	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	595	0	93.11	6.89	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	564	0	88.26	11.74	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	563	0	88.11	11.89	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	554	0	86.7	13.3	SEA	unnamed
7	O/K40/84*	KEN84-40	639	551	0	86.23	13.77	EA-1	unnamed
8	O/ETH/1/2007 (FJ798137)	ETH07-01	639	550	0	86.07	13.93	EA-3	unnamed
9	O/MYA/7/98 (DQ164925)	MYA98-07	639	546	0	85.45	14.55	SEA	Mya-98
10	O/SUD/2/86 (DQ165075)	SUD86-02	639	546	0	85.45	14.55	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/68/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-66 Location: Nodeh, Zhorgan, Galestan, Iran Date collected: 02/09/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-68.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	637	0	99.69	0.31	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	636	0	99.53	0.47	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	636	0	99.53	0.47	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	636	0	99.53	0.47	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	636	0	99.53	0.47	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	635	0	99.37	0.63	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	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	610	0	95.46	4.54	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	596	0	93.27	6.73	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	563	0	88.11	11.89	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	562	0	87.95	12.05	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	552	0	86.38	13.62	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	551	0	86.23	13.77	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	550	0	86.07	13.93	EA-1	unnamed
9	O/SUD/2/86 (DQ165075)	SUD86-02	639	547	0	85.6	14.4	EA-3	unnamed
10	O/MYA/7/98 (DQ164925)	MYA98-07	639	546	0	85.45	14.55	SEA	Mya-98
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/70/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-65 Location: Zagl, Heydarabad, Jelarjeh, Qom, Iran Date collected: 07/11/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Sheep/goats Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-70.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	635	0	99.37	0.63	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	635	0	99.37	0.63	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	634	0	99.22	0.78	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	634	0	99.22	0.78	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	634	0	99.22	0.78	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	634	0	99.22	0.78	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	634	0	99.22	0.78	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	633	0	99.06	0.94	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	633	0	99.06	0.94	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	639	633	0	99.06	0.94	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	593	0	92.8	7.2	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	568	0	88.89	11.11	ME-SA	unnamed
4	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	562	0	87.95	12.05	ME-SA	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	561	0	87.79	12.21	ME-SA	unnamed
6	O/ETH/1/2007 (FJ798137)	ETH07-01	639	552	0	86.38	13.62	EA-3	unnamed
7	O/TAI/189/87* (TRRL)	TAI87-AC	639	552	0	86.38	13.62	SEA	unnamed
8	O/K40/84*	KEN84-40	639	549	0	85.92	14.08	EA-1	unnamed
9	O/SUD/2/86 (DQ165075)	SUD86-02	639	549	0	85.92	14.08	EA-3	unnamed
10	O/MYA/7/98 (DQ164925)	MYA98-07	639	546	0	85.45	14.55	SEA	Mya-98
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/71/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-64 Location: Sedigh, Saldar, Qom, Iran Date collected: 11/11/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-71.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/22/2007	IRN07-22	639	624	0	97.65	2.35	ME-SA	PanAsia-2
2	O/PAK/15/2007	PAK07-15	639	624	0	97.65	2.35	ME-SA	PanAsia-2
3	O/PAK/21/2007	PAK07-21	639	624	0	97.65	2.35	ME-SA	PanAsia-2
4	O/PAK/35/2005 (FJ798166)	PAK05-35	639	624	0	97.65	2.35	ME-SA	PanAsia-2
5	O/PAK/56/2007 (FJ798180)	PAK07-56	639	624	0	97.65	2.35	ME-SA	PanAsia-2
6	O/PAK/60/2006 (FJ798168)	PAK06-60	639	624	0	97.65	2.35	ME-SA	PanAsia-2
7	O/PAK/63/2006 (FJ798170)	PAK06-63	639	624	0	97.65	2.35	ME-SA	PanAsia-2
8	O/PAK/73/2006 (FJ798177)	PAK06-73	639	624	0	97.65	2.35	ME-SA	PanAsia-2
9	O/PAK/33/2005 (FJ798164)	PAK05-33	639	623	0	97.5	2.5	ME-SA	PanAsia-2
10	O/PAK/71/2006 (FJ798175)	PAK06-71	639	623	0	97.5	2.5	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	589	0	92.18	7.82	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	570	0	89.2	10.8	ME-SA	unnamed
4	O/TAI/189/87* (TRRL)	TAI87-AC	639	563	0	88.11	11.89	SEA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	563	0	88.11	11.89	ME-SA	unnamed
6	O/IND/R2/75* (AF204276)	IND75--A	639	561	0	87.79	12.21	ME-SA	unnamed
7	O/K40/84*	KEN84-40	639	552	0	86.38	13.62	EA-1	unnamed
8	O/ETH/3/2004 (FJ798109)	ETH04-03	639	550	0	86.07	13.93	EA-3	unnamed
9	O/KEN/5/2002 (DQ165073)	KEN02-05	639	549	0	85.92	14.08	EA-2	unnamed
10	O/MYA/7/98 (DQ164925)	MYA98-07	639	549	0	85.92	14.08	SEA	Mya-98
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

IAH-P-EP-MEG-FOR-005-2

Page 1 of 1

Serotype: O WRLFMD Ref No: IRN/72/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-63 Location: Rashidi, Bam, Kermah, Iran Date collected: 20/11/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: Epi susp and BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: Ind-2001 Sequence filename: IRN09-72.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 days
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Comments: Both the 10% epithelium suspension and first BTy passage were sequenced and found to be identical to each other. This is the first detection of the Ind-2001 lineage in Iran.

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/18/2009	BHU09-18	639	634	0	99.22	0.78	ME-SA	Ind-2001
2	O/BHU/2/2009	BHU09-02	639	634	0	99.22	0.78	ME-SA	Ind-2001
3	O/BHU/4/2009	BHU09-04	639	634	0	99.22	0.78	ME-SA	Ind-2001
4	O/BHU/5/2009	BHU09-05	639	634	0	99.22	0.78	ME-SA	Ind-2001
5	O/BHU/6/2009	BHU09-06	639	634	0	99.22	0.78	ME-SA	Ind-2001
6	O/BAN/2/2009	BAN09-02	639	633	0	99.06	0.94	ME-SA	Ind-2001
7	O/BAN/26/2009	BAN09-26	639	633	0	99.06	0.94	ME-SA	Ind-2001
8	O/BAN/27/2009	BAN09-27	639	633	0	99.06	0.94	ME-SA	Ind-2001
9	O/BHU/10/2009	BHU09-10	639	633	0	99.06	0.94	ME-SA	Ind-2001
10	O/BHU/19/2009	BHU09-19	639	633	0	99.06	0.94	ME-SA	Ind-2001
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/UKG/35/2001 (AJ539141)	UKG01-35	639	571	0	89.36	10.64	ME-SA	PanAsia
2	O/IRN/8/2005	IRN05-08	639	567	0	88.73	11.27	ME-SA	PanAsia-2
3	O/IND/53/79 (AF292107)	IND79A53	639	562	0	87.95	12.05	ME-SA	unnamed
4	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	559	0	87.48	12.52	ME-SA	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	553	0	86.54	13.46	ME-SA	unnamed
6	O/SUD/2/86 (DQ165075)	SUD86-02	639	553	0	86.54	13.46	EA-3	unnamed
7	O/K40/84*	KEN84-40	639	552	0	86.38	13.62	EA-1	unnamed
8	O/ETH/1/2007 (FJ798137)	ETH07-01	639	549	0	85.92	14.08	EA-3	unnamed
9	O/TAI/189/87* (TRRL)	TAI87-AC	639	546	0	85.45	14.55	SEA	unnamed
10	O/ETH/3/2004 (FJ798109)	ETH04-03	639	539	0	84.35	15.65	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/75/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-76 Location: Rashidi, Bam, Kermah, Iran Date collected: 01/01/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Not Known Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-75.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/31/2009	IRN09-31	639	637	0	99.69	0.31	ME-SA	PanAsia-2
2	O/IRN/60/2009	IRN09-60	639	637	0	99.69	0.31	ME-SA	PanAsia-2
3	O/IRN/42/2009	IRN09-42	639	636	0	99.53	0.47	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	636	0	99.53	0.47	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	636	0	99.53	0.47	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	636	0	99.53	0.47	ME-SA	PanAsia-2
7	O/IRN/76/2009	IRN09-76	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/34/2009	IRN09-34	639	635	0	99.37	0.63	ME-SA	PanAsia-2
9	O/IRN/51/2009	IRN09-51	639	635	0	99.37	0.63	ME-SA	PanAsia-2
10	O/IRN/52/2009	IRN09-52	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	609	0	95.31	4.69	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	597	0	93.43	6.57	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	570	0	89.2	10.8	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	565	0	88.42	11.58	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	562	0	87.95	12.05	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	554	0	86.7	13.3	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	552	0	86.38	13.62	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	552	0	86.38	13.62	EA-1	unnamed
9	O/MYA/7/98 (DQ164925)	MYA98-07	639	548	0	85.76	14.24	SEA	Mya-98
10	O/SUD/2/86 (DQ165075)	SUD86-02	639	548	0	85.76	14.24	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

WRLFMD Genotyping Report Form

Serotype: O WRLFMD Ref No: IRN/76/2009 Batch No: WRLFMD/2009/00054 Sender Ref: IR-88-69B Location: Rashidi, Bam, Kermah, Iran Date collected: 01/01/2009 Date received by WRLFMD: 04/12/2009 Date received for sequencing: 12/01/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 29/01/2010 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ME-SA Genotype/strain: PanAsia-2 Sequence filename: IRN09-76.SEQ Date sequence last updated: 18/01/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2224 Min. no. of nt for comparison: 300 Total turn-around time: 56 days Sequencing time: 17 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/42/2009	IRN09-42	639	639	0	100	0	ME-SA	PanAsia-2
2	O/IRN/31/2009	IRN09-31	639	638	0	99.84	0.16	ME-SA	PanAsia-2
3	O/IRN/60/2009	IRN09-60	639	638	0	99.84	0.16	ME-SA	PanAsia-2
4	O/IRN/43/2009	IRN09-43	639	637	0	99.69	0.31	ME-SA	PanAsia-2
5	O/IRN/49/2009	IRN09-49	639	637	0	99.69	0.31	ME-SA	PanAsia-2
6	O/IRN/61/2009	IRN09-61	639	637	0	99.69	0.31	ME-SA	PanAsia-2
7	O/IRN/34/2009	IRN09-34	639	636	0	99.53	0.47	ME-SA	PanAsia-2
8	O/IRN/51/2009	IRN09-51	639	636	0	99.53	0.47	ME-SA	PanAsia-2
9	O/IRN/52/2009	IRN09-52	639	636	0	99.53	0.47	ME-SA	PanAsia-2
10	O/IRN/66/2009	IRN09-66	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	612	0	95.77	4.23	ME-SA	PanAsia-2
2	O/UKG/35/2001 (AJ539141)	UKG01-35	639	598	0	93.58	6.42	ME-SA	PanAsia
3	O/IND/53/79 (AF292107)	IND79A53	639	571	0	89.36	10.64	ME-SA	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	564	0	88.26	11.74	ME-SA	unnamed
5	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	563	0	88.11	11.89	ME-SA	unnamed
6	O/TAI/189/87* (TRRL)	TAI87-AC	639	553	0	86.54	13.46	SEA	unnamed
7	O/ETH/1/2007 (FJ798137)	ETH07-01	639	551	0	86.23	13.77	EA-3	unnamed
8	O/K40/84*	KEN84-40	639	551	0	86.23	13.77	EA-1	unnamed
9	O/MYA/7/98 (DQ164925)	MYA98-07	639	549	0	85.92	14.08	SEA	Mya-98
10	O/SUD/2/86 (DQ165075)	SUD86-02	639	547	0	85.6	14.4	EA-3	unnamed
nt, nucleotides *, not a WRLFMD reference number									

Report on FMDV O in Iran in 2009

Batch: WRLFMD/2009/00054

Software: MEGA 4.0

No. of Taxa : 349

Data File : n:\evd\meg\db\fmdv\o\IRN2009b.meg

Data Title : O Iran 2009

Data Type : Nucleotide (Coding)

Analysis : Phylogeny reconstruction

Tree Inference : =====

->Method : Neighbor-Joining

->Phylogeny Test and options : Bootstrap (1000 replicates; seed=64843)

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

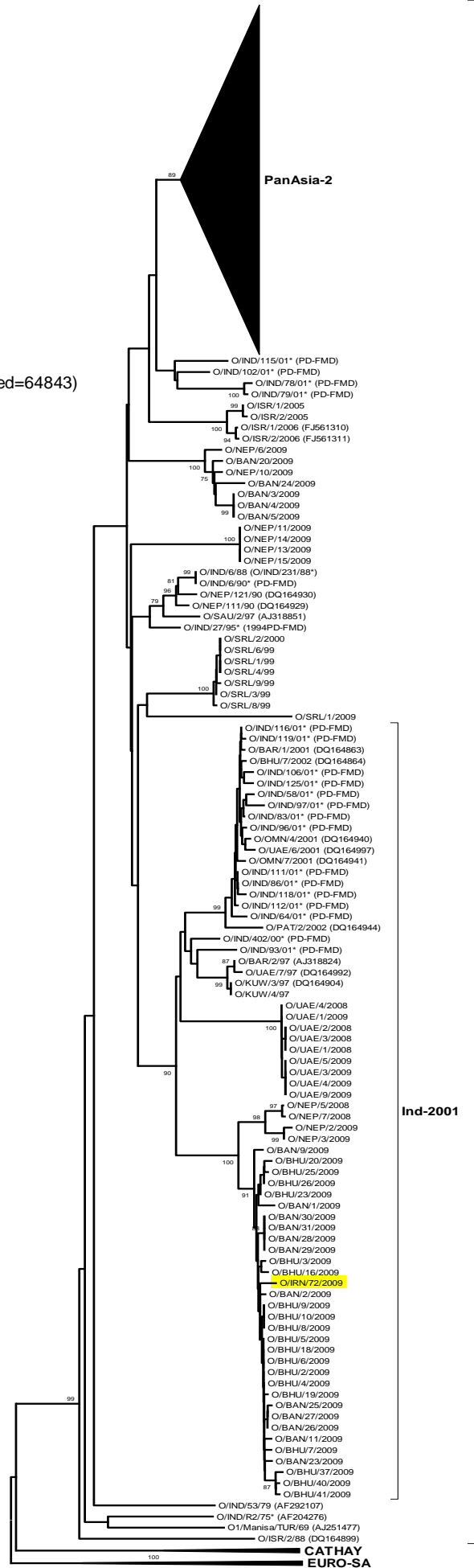
No. of Sites : 639

No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and above are shown

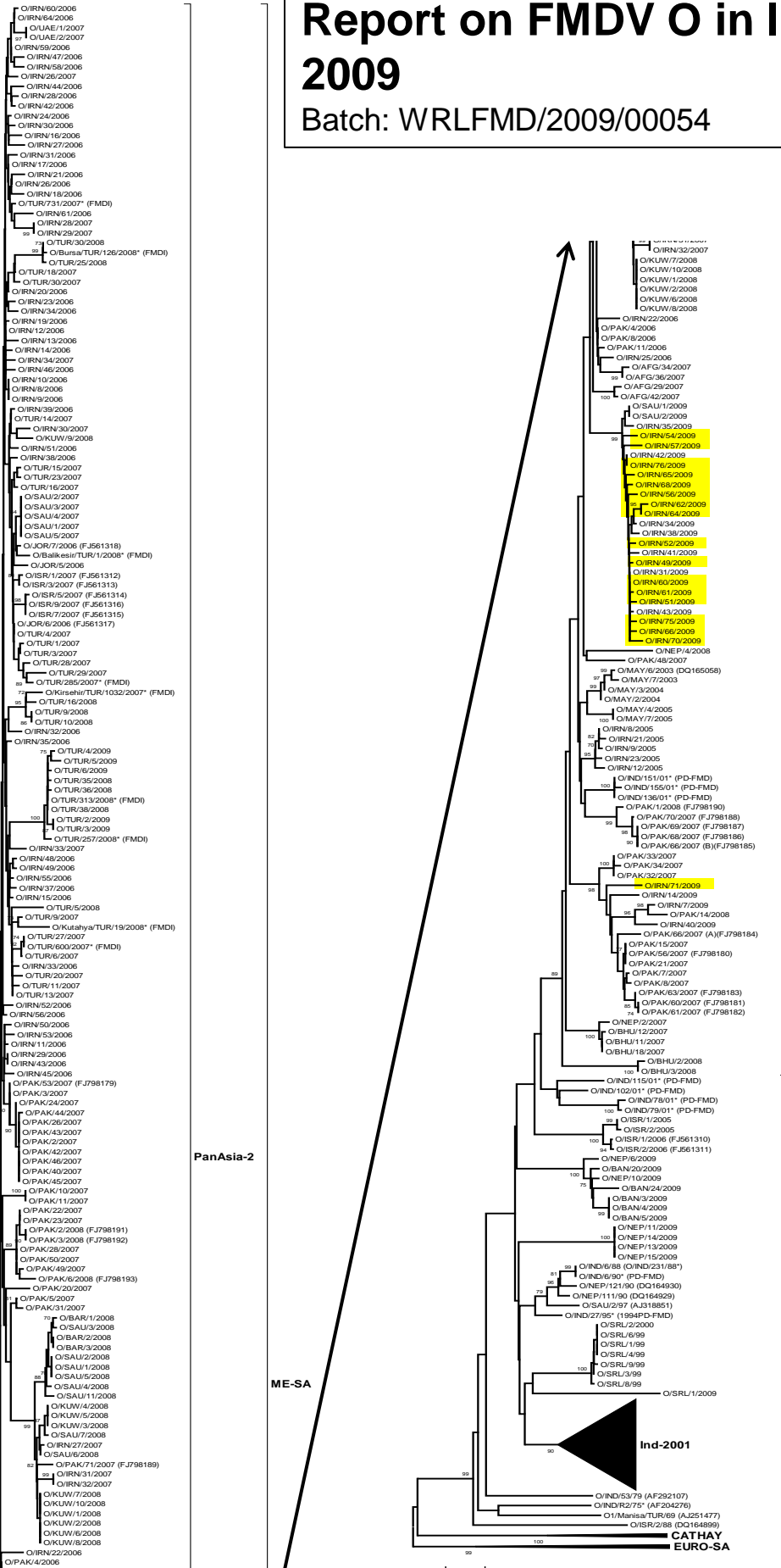
* , not a WRLFMD Ref. No.

N.J. Knowles & J. Wadsworth, 29 January 2010



Report on FMDV O in Iran in 2009

Batch: WRLFMD/2009/00054



PanAsia-2

ME-SA

Ind-2001

CATHAY
EURO-SA

0.02