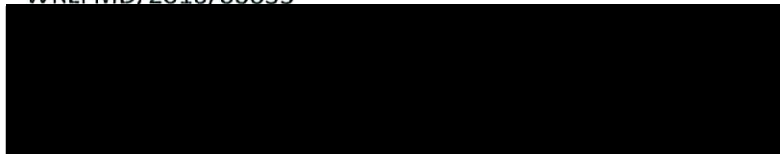




**INSTITUTE FOR ANIMAL HEALTH**  
Director: Professor Martin W. Shirley, PhD  
PIRBRIGHT LABORATORY  
Ash Road,  
Pirbright,  
Surrey,  
GU24 0NF  
Intn Tel: 00 44 1483 232441  
Tel: 01483 232441 Fax: 01483 232621

## FMD Sequencing Report

Lab Reference WRL Batch Number: WRLFMD/2010/00033  
Sender Details:

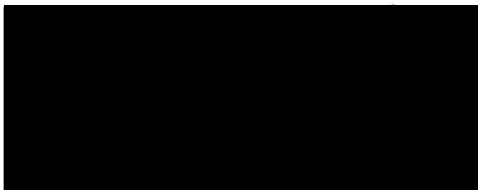


Date Received: 12<sup>th</sup> October 2010  
Country of Origin: Mongolia  
Date Reported: 3<sup>rd</sup> November 2010

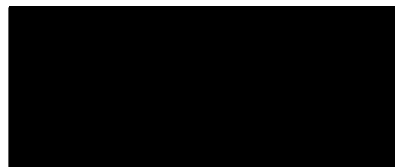
Dear Dr. Dashzeveg Bold,

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/>

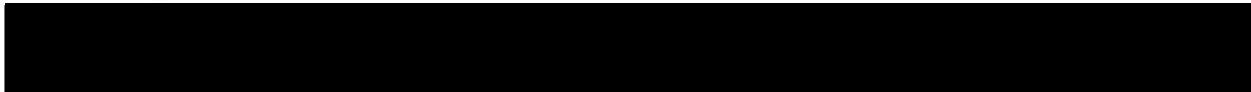
Results Approved By:



Official Stamp:



Date: 2/11/10



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](mailto:elizabeth.wilson@bbsrc.ac.uk))

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

## Genotyping Report

Report Date for this Batch: 26 October 2010

FMDV type O

Country: Mongolia

Period: 2010

No. of isolates: 8

BATCH: WRLFMD/2010/00033



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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 WRLFMD Ref No: MOG/1/2010 Batch No: WRLFMD/2010/00033 Sender Ref: O/MOG/45/2010 Location: Tsagaanchuluut Bag, Chuluunkhorout Sum, Domod Province, Mongolia Date collected: 10/09/2010 Date received by WRLFMD: 12/10/2010 Date received for sequencing: 22/10/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 26/10/2010 Reported by: N.J. Knowles Checked by: V. Mioulet Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MOG10-01.SEQ Date sequence last updated: 26/10/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2395 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MOG/3/2010	MOG10-03	639	637	0	99.69	0.31	SEA	Mya-98
2	O/MOG/4/2010	MOG10-04	639	637	0	99.69	0.31	SEA	Mya-98
3	O/MOG/2/2010	MOG10-02	639	636	0	99.53	0.47	SEA	Mya-98
4	O/MOG/CO3/2010	MOG10-AA	639	636	0	99.53	0.47	SEA	Mya-98
5	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	636	0	99.53	0.47	SEA	Mya-98
6	O/MOG/6/2010	MOG10-06	639	635	0	99.37	0.63	SEA	Mya-98
7	O/MOG/7/2010	MOG10-07	639	635	0	99.37	0.63	SEA	Mya-98
8	O/MOG/5/2010	MOG10-05	639	634	0	99.22	0.78	SEA	Mya-98
9	O/TAI/13/2009 (HQ116261)	TAI09-13	639	634	0	99.22	0.78	SEA	Mya-98
10	O/TAI/15/2009 (HQ116262)	TAI09-15	639	634	0	99.22	0.78	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	585	0	91.55	8.45	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	565	0	88.42	11.58	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	549	0	85.92	14.08	ME-SA	unnamed
4	O/CAM/3/98 (AJ294910)	CAM98-03	639	546	0	85.45	14.55	SEA	Cam-94
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	545	0	85.29	14.71	ME-SA	Pak-98
6	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	545	0	85.29	14.71	ME-SA	unnamed
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	542	0	84.82	15.18	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	541	0	84.66	15.34	ME-SA	PanAsia-2 <sup>TER-08</sup>
9	O/IRN/31/2009	IRN09-31	639	540	0	84.51	15.49	ME-SA	PanAsia-2 <sup>FAR-09</sup>
10	O/IRN/88/2009	IRN09-88	639	540	0	84.51	15.49	ME-SA	PanAsia-2 <sup>ANT-10</sup>

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

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Serotype: O	Report date: 26/10/2010
WRLFMD Ref No: MOG/2/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00033	Checked by: V. Mioulet
Sender Ref: O/MOG/46/2010	
Location: Engershand Bag, Choiballan Sum, Domod Province, Mongolia	Topotype: SEA
Date collected: 11/09/2010	Genotype/strain: Mya-98
Date received by WRLFMD: 12/10/2010	Sequence filename: MOG10-02.SEQ
Date received for sequencing: 22/10/2010	Date sequence last updated: 26/10/2010
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 O-1C272F/EUR-2B52R	Total no. of comparisons: 2395
	Min. no. of nt for comparison: 600
	Total turn-around time: 14 days
	Sequencing time: 4 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/MOG/1/2010	MOG10-01	639	636	0	99.53	0.47	SEA	Mya-98
2	O/MOG/3/2010	MOG10-03	639	636	0	99.53	0.47	SEA	Mya-98
3	O/MOG/4/2010	MOG10-04	639	636	0	99.53	0.47	SEA	Mya-98
4	O/MOG/CO3/2010	MOG10-AA	639	635	0	99.37	0.63	SEA	Mya-98
5	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	635	0	99.37	0.63	SEA	Mya-98
6	O/MOG/6/2010	MOG10-06	639	634	0	99.22	0.78	SEA	Mya-98
7	O/MOG/7/2010	MOG10-07	639	634	0	99.22	0.78	SEA	Mya-98
8	O/MOG/5/2010	MOG10-05	639	633	0	99.06	0.94	SEA	Mya-98
9	O/TAI/13/2009 (HQ116261)	TAI09-13	639	633	0	99.06	0.94	SEA	Mya-98
10	O/TAI/15/2009 (HQ116262)	TAI09-15	639	633	0	99.06	0.94	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	584	0	91.39	8.61	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	564	0	88.26	11.74	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	546	0	85.45	14.55	ME-SA	unnamed
4	O/PAK/16/2003 (DQ165068)	PAK03-16	639	546	0	85.45	14.55	ME-SA	Pak-98
5	O/CAM/3/98 (AJ294910)	CAM98-03	639	545	0	85.29	14.71	SEA	Cam-94
6	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	544	0	85.13	14.87	ME-SA	unnamed
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	543	0	84.98	15.02	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	542	0	84.82	15.18	ME-SA	PanAsia-2 <sup>TER-08</sup>
9	O/IRN/31/2009	IRN09-31	639	541	0	84.66	15.34	ME-SA	PanAsia-2 <sup>FAR-09</sup>
10	O/IRN/88/2009	IRN09-88	639	541	0	84.66	15.34	ME-SA	PanAsia-2 <sup>ANT-10</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MOG/3/2010 Batch No: WRLFMD/2010/00033 Sender Ref: O/MOG/50/2010 Location: 2nd Bag, Bayantumen Sum, Domod Province, Mongolia Date collected: 12/09/2010 Date received by WRLFMD: 12/10/2010 Date received for sequencing: 22/10/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 26/10/2010 Reported by: N.J. Knowles Checked by: V. Mioulet Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MOG10-03.SEQ Date sequence last updated: 26/10/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2395 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MOG/4/2010	MOG10-04	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MOG/1/2010	MOG10-01	639	637	0	99.69	0.31	SEA	Mya-98
3	O/MOG/2/2010	MOG10-02	639	636	0	99.53	0.47	SEA	Mya-98
4	O/MOG/CO3/2010	MOG10-AA	639	636	0	99.53	0.47	SEA	Mya-98
5	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	636	0	99.53	0.47	SEA	Mya-98
6	O/MOG/6/2010	MOG10-06	639	635	0	99.37	0.63	SEA	Mya-98
7	O/MOG/7/2010	MOG10-07	639	635	0	99.37	0.63	SEA	Mya-98
8	O/MOG/5/2010	MOG10-05	639	634	0	99.22	0.78	SEA	Mya-98
9	O/TAI/13/2009 (HQ116261)	TAI09-13	639	634	0	99.22	0.78	SEA	Mya-98
10	O/TAI/15/2009 (HQ116262)	TAI09-15	639	634	0	99.22	0.78	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	583	0	91.24	8.76	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	563	0	88.11	11.89	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	549	0	85.92	14.08	ME-SA	unnamed
4	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	545	0	85.29	14.71	ME-SA	unnamed
5	O/CAM/3/98 (AJ294910)	CAM98-03	639	544	0	85.13	14.87	SEA	Cam-94
6	O/PAK/16/2003 (DQ165068)	PAK03-16	639	543	0	84.98	15.02	ME-SA	Pak-98
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	540	0	84.51	15.49	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	539	0	84.35	15.65	ME-SA	PanAsia-2 <sup>TER-08</sup>
9	O/IND/53/79 (AF292107)	IND79A53	639	538	0	84.19	15.81	ME-SA	unnamed
10	O/IRN/31/2009	IRN09-31	639	538	0	84.19	15.81	ME-SA	PanAsia-2 <sup>FAR-09</sup>

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

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Serotype: O WRLFMD Ref No: MOG/4/2010 Batch No: WRLFMD/2010/00033 Sender Ref: O/MOG/54/2010 Location: 2nd Bag, Kherlen Sum, Domod Province, Mongolia Date collected: 12/09/2010 Date received by WRLFMD: 12/10/2010 Date received for sequencing: 22/10/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 26/10/2010 Reported by: N.J. Knowles Checked by: V. Mioulet Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MOG10-04.SEQ Date sequence last updated: 26/10/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2395 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MOG/3/2010	MOG10-03	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MOG/1/2010	MOG10-01	639	637	0	99.69	0.31	SEA	Mya-98
3	O/MOG/2/2010	MOG10-02	639	636	0	99.53	0.47	SEA	Mya-98
4	O/MOG/CO3/2010	MOG10-AA	639	636	0	99.53	0.47	SEA	Mya-98
5	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	636	0	99.53	0.47	SEA	Mya-98
6	O/MOG/6/2010	MOG10-06	639	635	0	99.37	0.63	SEA	Mya-98
7	O/MOG/7/2010	MOG10-07	639	635	0	99.37	0.63	SEA	Mya-98
8	O/MOG/5/2010	MOG10-05	639	634	0	99.22	0.78	SEA	Mya-98
9	O/TAI/13/2009 (HQ116261)	TAI09-13	639	634	0	99.22	0.78	SEA	Mya-98
10	O/TAI/15/2009 (HQ116262)	TAI09-15	639	634	0	99.22	0.78	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	583	0	91.24	8.76	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	563	0	88.11	11.89	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	549	0	85.92	14.08	ME-SA	unnamed
4	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	545	0	85.29	14.71	ME-SA	unnamed
5	O/CAM/3/98 (AJ294910)	CAM98-03	639	544	0	85.13	14.87	SEA	Cam-94
6	O/PAK/16/2003 (DQ165068)	PAK03-16	639	543	0	84.98	15.02	ME-SA	Pak-98
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	540	0	84.51	15.49	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	539	0	84.35	15.65	ME-SA	PanAsia-2 <sup>TER-08</sup>
9	O/IND/53/79 (AF292107)	IND79A53	639	538	0	84.19	15.81	ME-SA	unnamed
10	O/IRN/31/2009	IRN09-31	639	538	0	84.19	15.81	ME-SA	PanAsia-2 <sup>FAR-09</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O WRLFMD Ref No: MOG/5/2010 Batch No: WRLFMD/2010/00033 Sender Ref: O/MOG/59/2010 Location: 4th Bag, Bulgan Sum, Dornod Province, Mongolia Date collected: 12/09/2010 Date received by WRLFMD: 12/10/2010 Date received for sequencing: 22/10/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 26/10/2010 Reported by: N.J. Knowles Checked by: V. Mioulet Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MOG10-05.SEQ Date sequence last updated: 26/10/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2395 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MOG/6/2010	MOG10-06	639	636	0	99.53	0.47	SEA	Mya-98
2	O/MOG/7/2010	MOG10-07	639	636	0	99.53	0.47	SEA	Mya-98
3	O/MOG/CO3/2010	MOG10-AA	639	635	0	99.37	0.63	SEA	Mya-98
4	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	635	0	99.37	0.63	SEA	Mya-98
5	O/MOG/1/2010	MOG10-01	639	634	0	99.22	0.78	SEA	Mya-98
6	O/MOG/3/2010	MOG10-03	639	634	0	99.22	0.78	SEA	Mya-98
7	O/MOG/4/2010	MOG10-04	639	634	0	99.22	0.78	SEA	Mya-98
8	O/MOG/9/2010	MOG10-09	639	634	0	99.22	0.78	SEA	Mya-98
9	O/MOG/2/2010	MOG10-02	639	633	0	99.06	0.94	SEA	Mya-98
10	O/TAI/13/2009 (HQ116261)	TAI09-13	639	633	0	99.06	0.94	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	582	0	91.08	8.92	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	562	0	87.95	12.05	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	546	0	85.45	14.55	ME-SA	unnamed
4	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	542	0	84.82	15.18	ME-SA	Pak-98
6	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	540	0	84.51	15.49	ME-SA	unnamed
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	537	0	84.04	15.96	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	536	0	83.88	16.12	ME-SA	PanAsia-2 <sup>TER-08</sup>
9	O/IRN/31/2009	IRN09-31	639	535	0	83.72	16.28	ME-SA	PanAsia-2 <sup>FAR-09</sup>
10	O/IRN/88/2009	IRN09-88	639	535	0	83.72	16.28	ME-SA	PanAsia-2 <sup>ANT-10</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O WRLFMD Ref No: MOG/6/2010 Batch No: WRLFMD/2010/00033 Sender Ref: O/MOG/63/2010 Location: 4th Bag, Sukhbaatar Sum, Sukhbaatar Province, Mongolia Date collected: 04/09/2010 Date received by WRLFMD: 12/10/2010 Date received for sequencing: 22/10/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 26/10/2010 Reported by: N.J. Knowles Checked by: V. Mioulet  Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MOG10-06.SEQ Date sequence last updated: 26/10/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2395 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MOG/7/2010	MOG10-07	639	637	0	99.69	0.31	SEA	Mya-98
2	O/MOG/9/2010	MOG10-09	639	637	0	99.69	0.31	SEA	Mya-98
3	O/MOG/5/2010	MOG10-05	639	636	0	99.53	0.47	SEA	Mya-98
4	O/MOG/CO3/2010	MOG10-AA	639	636	0	99.53	0.47	SEA	Mya-98
5	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	636	0	99.53	0.47	SEA	Mya-98
6	O/MOG/1/2010	MOG10-01	639	635	0	99.37	0.63	SEA	Mya-98
7	O/MOG/3/2010	MOG10-03	639	635	0	99.37	0.63	SEA	Mya-98
8	O/MOG/4/2010	MOG10-04	639	635	0	99.37	0.63	SEA	Mya-98
9	O/MOG/2/2010	MOG10-02	639	634	0	99.22	0.78	SEA	Mya-98
10	O/TAI/13/2009 (HQ116261)	TAI09-13	639	634	0	99.22	0.78	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	581	0	90.92	9.08	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	561	0	87.79	12.21	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	545	0	85.29	14.71	ME-SA	unnamed
4	O/PAK/16/2003 (DQ165068)	PAK03-16	639	543	0	84.98	15.02	ME-SA	Pak-98
5	O/CAM/3/98 (AJ294910)	CAM98-03	639	542	0	84.82	15.18	SEA	Cam-94
6	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	541	0	84.66	15.34	ME-SA	unnamed
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	538	0	84.19	15.81	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/OMN/7/2001 (DQ164941)	OMN01-07	639	537	0	84.04	15.96	ME-SA	Ind-2001b
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 <sup>TER-08</sup>
10	O/IRN/31/2009	IRN09-31	639	536	0	83.88	16.12	ME-SA	PanAsia-2 <sup>FAR-09</sup>

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 WRLFMD Ref No: MOG/7/2010 Batch No: WRLFMD/2010/00033 Sender Ref: O/MOG/64/2010 Location: 1st Bag, Sukhbaatar Sum, Sukhbaatar Province, Mongolia Date collected: 06/09/2010 Date received by WRLFMD: 12/10/2010 Date received for sequencing: 22/10/2010 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 26/10/2010 Reported by: N.J. Knowles Checked by: V. Mioulet Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MOG10-07.SEQ Date sequence last updated: 26/10/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2395 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MOG/6/2010	MOG10-06	639	637	0	99.69	0.31	SEA	Mya-98
2	O/MOG/5/2010	MOG10-05	639	636	0	99.53	0.47	SEA	Mya-98
3	O/MOG/CO3/2010	MOG10-AA	639	636	0	99.53	0.47	SEA	Mya-98
4	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	636	0	99.53	0.47	SEA	Mya-98
5	O/MOG/1/2010	MOG10-01	639	635	0	99.37	0.63	SEA	Mya-98
6	O/MOG/3/2010	MOG10-03	639	635	0	99.37	0.63	SEA	Mya-98
7	O/MOG/4/2010	MOG10-04	639	635	0	99.37	0.63	SEA	Mya-98
8	O/MOG/9/2010	MOG10-09	639	635	0	99.37	0.63	SEA	Mya-98
9	O/MOG/2/2010	MOG10-02	639	634	0	99.22	0.78	SEA	Mya-98
10	O/TAI/13/2009 (HQ116261)	TAI09-13	639	634	0	99.22	0.78	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	581	0	90.92	9.08	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	561	0	87.79	12.21	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	545	0	85.29	14.71	ME-SA	unnamed
4	O/PAK/16/2003 (DQ165068)	PAK03-16	639	543	0	84.98	15.02	ME-SA	Pak-98
5	O/CAM/3/98 (AJ294910)	CAM98-03	639	542	0	84.82	15.18	SEA	Cam-94
6	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	541	0	84.66	15.34	ME-SA	unnamed
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	538	0	84.19	15.81	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 <sup>TER-08</sup>
9	O/IRN/31/2009	IRN09-31	639	536	0	83.88	16.12	ME-SA	PanAsia-2 <sup>FAR-09</sup>
10	O/IRN/88/2009	IRN09-88	639	536	0	83.88	16.12	ME-SA	PanAsia-2 <sup>ANT-10</sup>

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 WRLFMD Ref No: MOG/9/2010 Batch No: WRLFMD/2010/00033 Sender Ref: O/MOG/66/2010 Location: 1st Bag, Matad Sum, Domod Province, Mongolia Date collected: 07/09/2010 Date received by WRLFMD: 12/10/2010 Date received for sequencing: 22/10/2010 Species: Gazelle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 26/10/2010 Reported by: N.J. Knowles Checked by: V. Mioulet  Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MOG10-09.SEQ Date sequence last updated: 26/10/2010 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2395 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MOG/6/2010	MOG10-06	639	637	0	99.69	0.31	SEA	Mya-98
2	O/MOG/7/2010	MOG10-07	639	635	0	99.37	0.63	SEA	Mya-98
3	O/MOG/5/2010	MOG10-05	639	634	0	99.22	0.78	SEA	Mya-98
4	O/MOG/CO3/2010	MOG10-AA	639	634	0	99.22	0.78	SEA	Mya-98
5	O/RUS/Aug 2010 (ARRIAH)	RUS10-AB	639	634	0	99.22	0.78	SEA	Mya-98
6	O/MOG/1/2010	MOG10-01	639	633	0	99.06	0.94	SEA	Mya-98
7	O/MOG/3/2010	MOG10-03	639	633	0	99.06	0.94	SEA	Mya-98
8	O/MOG/4/2010	MOG10-04	639	633	0	99.06	0.94	SEA	Mya-98
9	O/MOG/2/2010	MOG10-02	639	632	0	98.90	1.10	SEA	Mya-98
10	O/TAI/13/2009 (HQ116261)	TAI09-13	639	632	0	98.90	1.10	SEA	Mya-98
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MYA/7/98 (DQ164925)	MYA98-07	639	579	0	90.61	9.39	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	559	0	87.48	12.52	SEA	unnamed
3	O/IND/R2/75* (AF204276)	IND75--A	639	543	0	84.98	15.02	ME-SA	unnamed
4	O/CAM/3/98 (AJ294910)	CAM98-03	639	542	0	84.82	15.18	SEA	Cam-94
5	O/PAK/16/2003 (DQ165068)	PAK03-16	639	541	0	84.66	15.34	ME-SA	Pak-98
6	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	541	0	84.66	15.34	ME-SA	unnamed
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	536	0	83.88	16.12	ME-SA	PanAsia-2 <sup>SAN-09</sup>
8	O/OMN/7/2001 (DQ164941)	OMN01-07	639	535	0	83.72	16.28	ME-SA	Ind-2001b
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	535	0	83.72	16.28	ME-SA	PanAsia-2 <sup>TER-08</sup>
10	O/IRN/31/2009	IRN09-31	639	534	0	83.57	16.43	ME-SA	PanAsia-2 <sup>FAR-09</sup>

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v3.11

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# Report on FMDV O in Mongolia in 2010

Batch: WRLFMD/2010/00033

Software: MEGA 4.0

No. of Taxa : 253

Data File : n:\evd\meg\db\fmdv\o\MOG2010b.meg

Data Title : O Mongolia 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

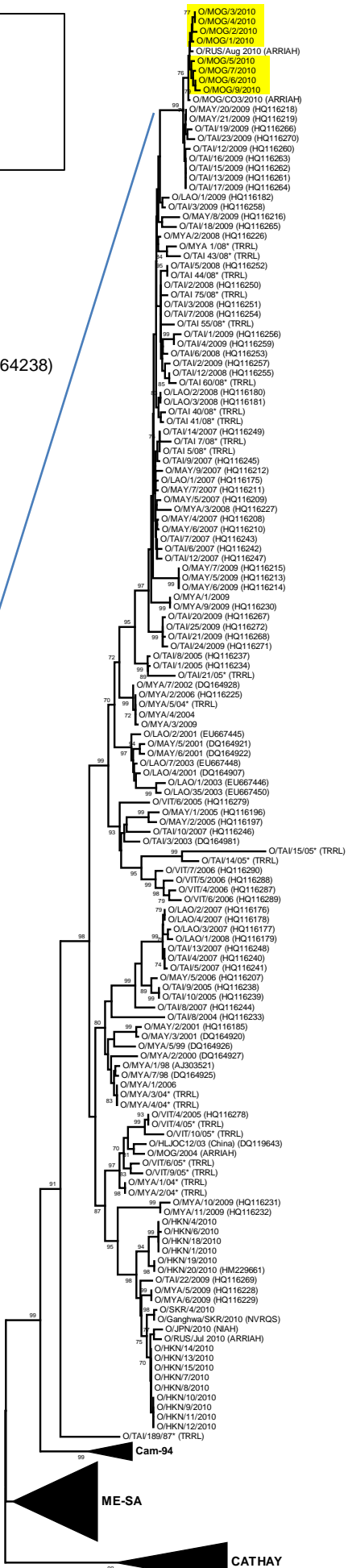
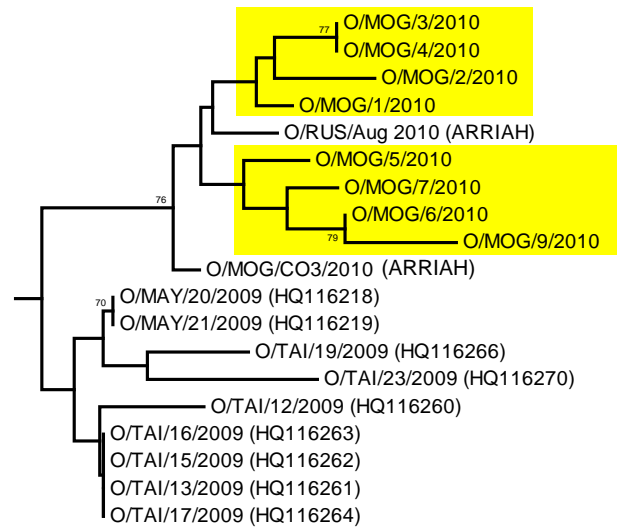
No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and above are shown

\*, not a WRLFMD Ref. No.

N.J. Knowles & J. Wadsworth, 26 October 2010

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Mya-98

SEA

0.02