

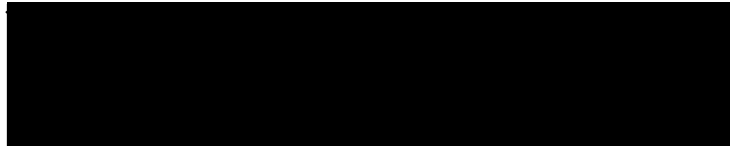


INSTITUTE FOR ANIMAL HEALTH
Director: Professor John Fazakerley BSc, MBA, PhD, FRCPath
PIRBRIGHT LABORATORY
Ash Road,
Pirbright,
Surrey,
GU24 0NF
Intn Tel: 00 44 1483 232441
Tel: 01483 232441 Fax: 01483 232621

FMD Genotyping Report

Lab Reference WRL Batch Number: WRLFMD/2011/00044

Sender Details:



Date Received: 2nd November 2011

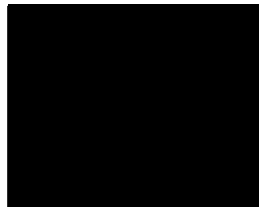
Country of Origin: Ethiopia

Date Reported: 18th November 2011

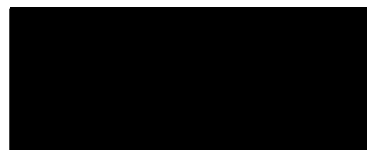
Dear Tesfaye Rufael

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:

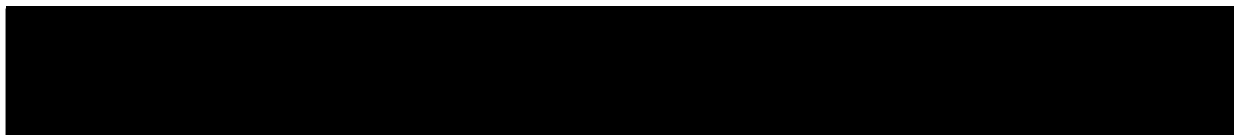


Official Stamp:



Date:

21/11/11



A UKAS accredited testing laboratory No. 4025.

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: gareth.shimmon@iah.ac.uk. IAH actively seeks and appreciates feedback, if you would like to offer feedback please complete the WRLFMD survey here: <http://www.surveymonkey.com/s/WRLFMD>

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

Genotyping Report

Report Date for this Batch: 17 November 2011

FMDV type O

Country: Ethiopia

Period: 2011

No. of samples: 10

BATCH: WRLFMD/2011/00044



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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: ETH/1/2011 Batch No: WRLFMD/2011/00044 Sender Ref: 01 DET/11 Location: Debre Ziet, East Shena, Oromia, Ethiopia Date collected: 28/07/2011 Date received by WRLFMD: 02/11/2011 Date received for sequencing: 09/11/2011 Species: Pig Material used: RS1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 17/11/2011 Reported by: N.J. Knowles Checked by: D.P. King Topotype: EA-3 Genotype/strain: unnamed Sequence filename: ETH11-01.SEQ Date sequence last updated: 17/11/2011 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3176 Min. no. of nt for comparison: 600 Total turn-around time: 15 days Sequencing time: 8 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/ETH/2/2011	ETH11-02	639	639	0	100.00	0.00	EA-3	unnamed
2	O/ETH/7/2011	ETH11-07	639	638	0	99.84	0.16	EA-3	unnamed
3	O/ETH/7/2010	ETH10-07	639	632	0	98.90	1.10	EA-3	unnamed
4	O/ETH/45/2009	ETH09-45	639	631	0	98.75	1.25	EA-3	unnamed
5	O/ETH/8/2010	ETH10-08	639	631	0	98.75	1.25	EA-3	unnamed
6	O/ETH/11/2011	ETH11-11	639	624	0	97.65	2.35	EA-3	unnamed
7	O/ETH/3/2011	ETH11-03	639	623	0	97.50	2.50	EA-3	unnamed
8	O/ETH/4/2011	ETH11-04	639	623	0	97.50	2.50	EA-3	unnamed
9	O/ETH/5/2011	ETH11-05	639	623	0	97.50	2.50	EA-3	unnamed
10	O/ETH/9/2011	ETH11-09	639	622	0	97.34	2.66	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	600	0	93.90	6.10	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	589	0	92.18	7.82	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	566	0	88.58	11.42	EA-3	unnamed
4	O/K40/84*	KEN84-40	639	550	0	86.07	13.93	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	549	0	85.92	14.08	ME-SA	unnamed
6	O/K83/79* (AJ303511)	KEN79B83	638	547	1	85.74	14.26	EA-1	unnamed
7	O/TAN/2/2004	TAN04-02	639	545	0	85.29	14.71	EA-2	unnamed
8	O/BHU/3/2009	BHU09-03	639	544	0	85.13	14.87	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	544	0	85.13	14.87	ME-SA	unnamed
10	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed

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: ETH/2/2011 Batch No: WRLFMD/2011/00044 Sender Ref: 02 DET/11 Location: Debre Ziet, East Shena, Oromia, Ethiopia Date collected: 28/07/2011 Date received by WRLFMD: 02/11/2011 Date received for sequencing: 09/11/2011 Species: Pig Material used: RS1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 17/11/2011 Reported by: N.J. Knowles Checked by: D.P. King Topotype: EA-3 Genotype/strain: unnamed Sequence filename: ETH11-02.SEQ Date sequence last updated: 11/11/2011 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3176 Min. no. of nt for comparison: 600 Total turn-around time: 15 days Sequencing time: 8 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/ETH/1/2011	ETH11-01	639	639	0	100.00	0.00	EA-3	unnamed
2	O/ETH/7/2011	ETH11-07	639	638	0	99.84	0.16	EA-3	unnamed
3	O/ETH/7/2010	ETH10-07	639	632	0	98.90	1.10	EA-3	unnamed
4	O/ETH/45/2009	ETH09-45	639	631	0	98.75	1.25	EA-3	unnamed
5	O/ETH/8/2010	ETH10-08	639	631	0	98.75	1.25	EA-3	unnamed
6	O/ETH/11/2011	ETH11-11	639	624	0	97.65	2.35	EA-3	unnamed
7	O/ETH/3/2011	ETH11-03	639	623	0	97.50	2.50	EA-3	unnamed
8	O/ETH/4/2011	ETH11-04	639	623	0	97.50	2.50	EA-3	unnamed
9	O/ETH/5/2011	ETH11-05	639	623	0	97.50	2.50	EA-3	unnamed
10	O/ETH/9/2011	ETH11-09	639	622	0	97.34	2.66	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	600	0	93.90	6.10	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	589	0	92.18	7.82	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	566	0	88.58	11.42	EA-3	unnamed
4	O/K40/84*	KEN84-40	639	550	0	86.07	13.93	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	549	0	85.92	14.08	ME-SA	unnamed
6	O/K83/79* (AJ303511)	KEN79B83	638	547	1	85.74	14.26	EA-1	unnamed
7	O/TAN/2/2004	TAN04-02	639	545	0	85.29	14.71	EA-2	unnamed
8	O/BHU/3/2009	BHU09-03	639	544	0	85.13	14.87	ME-SA	Ind-2001d
9	O/IND/53/79 (AF292107)	IND79A53	639	544	0	85.13	14.87	ME-SA	unnamed
10	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed

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	Report date: 17/11/2011
WRLFMD Ref No: ETH/3/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2011/00044	Checked by: D.P. King
Sender Ref: 06-SET/11	
Location: Sodo, Sodo, SNNP, Ethiopia	Topotype: EA-3
Date collected: 05/10/2011	Genotype/strain: unnamed
Date received by WRLFMD: 02/11/2011	Sequence filename: ETH11-03.SEQ
Date received for sequencing: 09/11/2011	Date sequence last updated: 11/11/2011
Species: Cattle	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: 3176
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 15 days
	Sequencing time: 8 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/ETH/4/2011	ETH11-04	639	639	0	100.00	0.00	EA-3	unnamed
2	O/ETH/5/2011	ETH11-05	639	639	0	100.00	0.00	EA-3	unnamed
3	O/ETH/11/2011	ETH11-11	639	634	0	99.22	0.78	EA-3	unnamed
4	O/ETH/9/2011	ETH11-09	639	632	0	98.90	1.10	EA-3	unnamed
5	O/ETH/10/2011	ETH11-10	639	631	0	98.75	1.25	EA-3	unnamed
6	O/ETH/12/2011	ETH11-12	639	631	0	98.75	1.25	EA-3	unnamed
7	O/ETH/45/2009	ETH09-45	639	631	0	98.75	1.25	EA-3	unnamed
8	O/ETH/7/2010	ETH10-07	639	628	0	98.28	1.72	EA-3	unnamed
9	O/ETH/8/2010	ETH10-08	639	628	0	98.28	1.72	EA-3	unnamed
10	O/ETH/7/2011	ETH11-07	639	624	0	97.65	2.35	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	594	0	92.96	7.04	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	588	0	92.02	7.98	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	559	0	87.48	12.52	EA-3	unnamed
4	O/K83/79* (AJ303511)	KEN79B83	638	551	1	86.36	13.64	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	548	0	85.76	14.24	ME-SA	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	546	0	85.45	14.55	ME-SA	unnamed
7	O/K40/84*	KEN84-40	639	546	0	85.45	14.55	EA-1	unnamed
8	O/UGA/5/96 (AJ296327)	UGA96-05	639	545	0	85.29	14.71	EA-1	unnamed
9	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed
10	O/ETH/58/2005 (FJ798141)	ETH05-58	639	543	0	84.98	15.02	EA-4	unnamed

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	Report date: 17/11/2011
WRLFMD Ref No: ETH/4/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2011/00044	Checked by: D.P. King
Sender Ref: 07-SET/11	
Location: Sodo, Sodo, SNNP, Ethiopia	Topotype: EA-3
Date collected: 05/10/2011	Genotype/strain: unnamed
Date received by WRLFMD: 02/11/2011	Sequence filename: ETH11-04.SEQ
Date received for sequencing: 09/11/2011	Date sequence last updated: 11/11/2011
Species: Cattle	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: 3176
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 15 days
	Sequencing time: 8 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/ETH/3/2011	ETH11-03	639	639	0	100.00	0.00	EA-3	unnamed
2	O/ETH/5/2011	ETH11-05	639	639	0	100.00	0.00	EA-3	unnamed
3	O/ETH/11/2011	ETH11-11	639	634	0	99.22	0.78	EA-3	unnamed
4	O/ETH/9/2011	ETH11-09	639	632	0	98.90	1.10	EA-3	unnamed
5	O/ETH/10/2011	ETH11-10	639	631	0	98.75	1.25	EA-3	unnamed
6	O/ETH/12/2011	ETH11-12	639	631	0	98.75	1.25	EA-3	unnamed
7	O/ETH/45/2009	ETH09-45	639	631	0	98.75	1.25	EA-3	unnamed
8	O/ETH/7/2010	ETH10-07	639	628	0	98.28	1.72	EA-3	unnamed
9	O/ETH/8/2010	ETH10-08	639	628	0	98.28	1.72	EA-3	unnamed
10	O/ETH/7/2011	ETH11-07	639	624	0	97.65	2.35	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	594	0	92.96	7.04	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	588	0	92.02	7.98	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	559	0	87.48	12.52	EA-3	unnamed
4	O/K83/79* (AJ303511)	KEN79B83	638	551	1	86.36	13.64	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	548	0	85.76	14.24	ME-SA	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	546	0	85.45	14.55	ME-SA	unnamed
7	O/K40/84*	KEN84-40	639	546	0	85.45	14.55	EA-1	unnamed
8	O/UGA/5/96 (AJ296327)	UGA96-05	639	545	0	85.29	14.71	EA-1	unnamed
9	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed
10	O/ETH/58/2005 (FJ798141)	ETH05-58	639	543	0	84.98	15.02	EA-4	unnamed

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	Report date: 17/11/2011
WRLFMD Ref No: ETH/5/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2011/00044	Checked by: D.P. King
Sender Ref: 08-SET/11	
Location: Sodo, Sodo, SNNP, Ethiopia	Topotype: EA-3
Date collected: 05/10/2011	Genotype/strain: unnamed
Date received by WRLFMD: 02/11/2011	Sequence filename: ETH11-05.SEQ
Date received for sequencing: 09/11/2011	Date sequence last updated: 11/11/2011
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: 3176
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 15 days
	Sequencing time: 8 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/ETH/3/2011	ETH11-03	639	639	0	100.00	0.00	EA-3	unnamed
2	O/ETH/4/2011	ETH11-04	639	639	0	100.00	0.00	EA-3	unnamed
3	O/ETH/11/2011	ETH11-11	639	634	0	99.22	0.78	EA-3	unnamed
4	O/ETH/9/2011	ETH11-09	639	632	0	98.90	1.10	EA-3	unnamed
5	O/ETH/10/2011	ETH11-10	639	631	0	98.75	1.25	EA-3	unnamed
6	O/ETH/12/2011	ETH11-12	639	631	0	98.75	1.25	EA-3	unnamed
7	O/ETH/45/2009	ETH09-45	639	631	0	98.75	1.25	EA-3	unnamed
8	O/ETH/7/2010	ETH10-07	639	628	0	98.28	1.72	EA-3	unnamed
9	O/ETH/8/2010	ETH10-08	639	628	0	98.28	1.72	EA-3	unnamed
10	O/ETH/7/2011	ETH11-07	639	624	0	97.65	2.35	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	594	0	92.96	7.04	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	588	0	92.02	7.98	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	559	0	87.48	12.52	EA-3	unnamed
4	O/K83/79* (AJ303511)	KEN79B83	638	551	1	86.36	13.64	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	548	0	85.76	14.24	ME-SA	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	546	0	85.45	14.55	ME-SA	unnamed
7	O/K40/84*	KEN84-40	639	546	0	85.45	14.55	EA-1	unnamed
8	O/UGA/5/96 (AJ296327)	UGA96-05	639	545	0	85.29	14.71	EA-1	unnamed
9	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed
10	O/ETH/58/2005 (FJ798141)	ETH05-58	639	543	0	84.98	15.02	EA-4	unnamed

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: ETH/7/2011 Batch No: WRLFMD/2011/00044 Sender Ref: 10-SUET/11 Location: Sululta, Liyu Zone, Addis Ababa Area, Ethiopia Date collected: 13/10/2011 Date received by WRLFMD: 02/11/2011 Date received for sequencing: 09/11/2011 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 17/11/2011 Reported by: N.J. Knowles Checked by: D.P. King Topotype: EA-3 Genotype/strain: unnamed Sequence filename: ETH11-07.SEQ Date sequence last updated: 11/11/2011 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3176 Min. no. of nt for comparison: 600 Total turn-around time: 15 days Sequencing time: 8 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/ETH/1/2011	ETH11-01	639	638	0	99.84	0.16	EA-3	unnamed
2	O/ETH/2/2011	ETH11-02	639	638	0	99.84	0.16	EA-3	unnamed
3	O/ETH/7/2010	ETH10-07	639	633	0	99.06	0.94	EA-3	unnamed
4	O/ETH/45/2009	ETH09-45	639	632	0	98.90	1.10	EA-3	unnamed
5	O/ETH/8/2010	ETH10-08	639	632	0	98.90	1.10	EA-3	unnamed
6	O/ETH/11/2011	ETH11-11	639	625	0	97.81	2.19	EA-3	unnamed
7	O/ETH/3/2011	ETH11-03	639	624	0	97.65	2.35	EA-3	unnamed
8	O/ETH/4/2011	ETH11-04	639	624	0	97.65	2.35	EA-3	unnamed
9	O/ETH/5/2011	ETH11-05	639	624	0	97.65	2.35	EA-3	unnamed
10	O/ETH/9/2011	ETH11-09	639	623	0	97.50	2.50	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	599	0	93.74	6.26	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	588	0	92.02	7.98	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	565	0	88.42	11.58	EA-3	unnamed
4	O/K40/84*	KEN84-40	639	549	0	85.92	14.08	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	548	0	85.76	14.24	ME-SA	unnamed
6	O/K83/79* (AJ303511)	KEN79B83	638	546	1	85.58	14.42	EA-1	unnamed
7	O/TAN/2/2004	TAN04-02	639	545	0	85.29	14.71	EA-2	unnamed
8	O/UGA/5/96 (AJ296327)	UGA96-05	639	544	0	85.13	14.87	EA-1	unnamed
9	O/BHU/3/2009	BHU09-03	639	543	0	84.98	15.02	ME-SA	Ind-2001d
10	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed

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	Report date: 17/11/2011
WRLFMD Ref No: ETH/9/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2011/00044	Checked by: D.P. King
Sender Ref: 04-GET/4	
Location: Uruga, Gujii, Oromia, Ethiopia	Topotype: EA-3
Date collected: 20/10/2011	Genotype/strain: unnamed
Date received by WRLFMD: 02/11/2011	Sequence filename: ETH11-09.SEQ
Date received for sequencing: 09/11/2011	Date sequence last updated: 17/11/2011
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: 3176
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 15 days
	Sequencing time: 8 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/ETH/10/2011	ETH11-10	639	638	0	99.84	0.16	EA-3	unnamed
2	O/ETH/11/2011	ETH11-11	639	633	0	99.06	0.94	EA-3	unnamed
3	O/ETH/3/2011	ETH11-03	639	632	0	98.90	1.10	EA-3	unnamed
4	O/ETH/4/2011	ETH11-04	639	632	0	98.90	1.10	EA-3	unnamed
5	O/ETH/5/2011	ETH11-05	639	632	0	98.90	1.10	EA-3	unnamed
6	O/ETH/12/2011	ETH11-12	639	630	0	98.59	1.41	EA-3	unnamed
7	O/ETH/45/2009	ETH09-45	639	630	0	98.59	1.41	EA-3	unnamed
8	O/ETH/7/2010	ETH10-07	639	627	0	98.12	1.88	EA-3	unnamed
9	O/ETH/8/2010	ETH10-08	639	627	0	98.12	1.88	EA-3	unnamed
10	O/ETH/7/2011	ETH11-07	639	623	0	97.50	2.50	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	593	0	92.80	7.20	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	587	0	91.86	8.14	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	556	0	87.01	12.99	EA-3	unnamed
4	O/K83/79* (AJ303511)	KEN79B83	638	547	1	85.74	14.26	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	547	0	85.60	14.40	ME-SA	unnamed
6	O/K40/84*	KEN84-40	639	544	0	85.13	14.87	EA-1	unnamed
7	O/ETH/2/2006 (FJ798127)	ETH06-02	639	542	0	84.82	15.18	EA-3	unnamed
8	O/IND/53/79 (AF292107)	IND79A53	639	542	0	84.82	15.18	ME-SA	unnamed
9	O/UGA/5/96 (AJ296327)	UGA96-05	639	541	0	84.66	15.34	EA-1	unnamed
10	O/BHU/3/2009	BHU09-03	639	539	0	84.35	15.65	ME-SA	Ind-2001d

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 17/11/2011
WRLFMD Ref No: ETH/10/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2011/00044	Checked by: D.P. King
Sender Ref: 05-GET/4	
Location: Uraga, Gujji, Oromia, Ethiopia	Topotype: EA-3
Date collected: 20/10/2011	Genotype/strain: unnamed
Date received by WRLFMD: 02/11/2011	Sequence filename: ETH11-10.SEQ
Date received for sequencing: 09/11/2011	Date sequence last updated: 11/11/2011
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: 3176
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 15 days
	Sequencing time: 8 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/ETH/9/2011	ETH11-09	639	638	0	99.84	0.16	EA-3	unnamed
2	O/ETH/11/2011	ETH11-11	639	632	0	98.90	1.10	EA-3	unnamed
3	O/ETH/3/2011	ETH11-03	639	631	0	98.75	1.25	EA-3	unnamed
4	O/ETH/4/2011	ETH11-04	639	631	0	98.75	1.25	EA-3	unnamed
5	O/ETH/5/2011	ETH11-05	639	631	0	98.75	1.25	EA-3	unnamed
6	O/ETH/12/2011	ETH11-12	639	629	0	98.44	1.56	EA-3	unnamed
7	O/ETH/45/2009	ETH09-45	639	629	0	98.44	1.56	EA-3	unnamed
8	O/ETH/7/2010	ETH10-07	639	626	0	97.97	2.03	EA-3	unnamed
9	O/ETH/8/2010	ETH10-08	639	626	0	97.97	2.03	EA-3	unnamed
10	O/ETH/7/2011	ETH11-07	639	622	0	97.34	2.66	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	592	0	92.64	7.36	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	586	0	91.71	8.29	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	555	0	86.85	13.15	EA-3	unnamed
4	O/K83/79* (AJ303511)	KEN79B83	638	546	1	85.58	14.42	EA-1	unnamed
5	O/IND/R2/75* (AF204276)	IND75--A	639	546	0	85.45	14.55	ME-SA	unnamed
6	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed
7	O/IND/53/79 (AF292107)	IND79A53	639	543	0	84.98	15.02	ME-SA	unnamed
8	O/K40/84*	KEN84-40	639	543	0	84.98	15.02	EA-1	unnamed
9	O/UGA/5/96 (AJ296327)	UGA96-05	639	540	0	84.51	15.49	EA-1	unnamed
10	O/ETH/58/2005 (FJ798141)	ETH05-58	639	539	0	84.35	15.65	EA-4	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 17/11/2011
WRLFMD Ref No: ETH/11/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2011/00044	Checked by: D.P. King
Sender Ref: 11-GUET/11	
Location: Gunga, Gujii, Oronia, Ethiopia	Topotype: EA-3
Date collected: 26/10/2011	Genotype/strain: unnamed
Date received by WRLFMD: 02/11/2011	Sequence filename: ETH11-11.SEQ
Date received for sequencing: 09/11/2011	Date sequence last updated: 11/11/2011
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: 3176
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 15 days
	Sequencing time: 8 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/ETH/12/2011	ETH11-12	639	636	0	99.53	0.47	EA-3	unnamed
2	O/ETH/3/2011	ETH11-03	639	634	0	99.22	0.78	EA-3	unnamed
3	O/ETH/4/2011	ETH11-04	639	634	0	99.22	0.78	EA-3	unnamed
4	O/ETH/5/2011	ETH11-05	639	634	0	99.22	0.78	EA-3	unnamed
5	O/ETH/9/2011	ETH11-09	639	633	0	99.06	0.94	EA-3	unnamed
6	O/ETH/10/2011	ETH11-10	639	632	0	98.90	1.10	EA-3	unnamed
7	O/ETH/45/2009	ETH09-45	639	632	0	98.90	1.10	EA-3	unnamed
8	O/ETH/7/2010	ETH10-07	639	629	0	98.44	1.56	EA-3	unnamed
9	O/ETH/8/2010	ETH10-08	639	629	0	98.44	1.56	EA-3	unnamed
10	O/ETH/7/2011	ETH11-07	639	625	0	97.81	2.19	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	596	0	93.27	6.73	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	589	0	92.18	7.82	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	560	0	87.64	12.36	EA-3	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	551	0	86.23	13.77	ME-SA	unnamed
5	O/K83/79* (AJ303511)	KEN79B83	638	547	1	85.74	14.26	EA-1	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	546	0	85.45	14.55	ME-SA	unnamed
7	O/K40/84*	KEN84-40	639	546	0	85.45	14.55	EA-1	unnamed
8	O/ETH/2/2006 (FJ798127)	ETH06-02	639	544	0	85.13	14.87	EA-3	unnamed
9	O/BHU/3/2009	BHU09-03	639	543	0	84.98	15.02	ME-SA	Ind-2001d
10	O/UGA/5/96 (AJ296327)	UGA96-05	639	543	0	84.98	15.02	EA-1	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 17/11/2011
WRLFMD Ref No: ETH/12/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2011/00044	Checked by: D.P. King
Sender Ref: 12-GUET/11	
Location: Gunga, Gujii, Oronia, Ethiopia	Topotype: EA-3
Date collected: 26/10/2011	Genotype/strain: unnamed
Date received by WRLFMD: 02/11/2011	Sequence filename: ETH11-12.SEQ
Date received for sequencing: 09/11/2011	Date sequence last updated: 11/11/2011
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: 3176
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 15 days
	Sequencing time: 8 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/ETH/11/2011	ETH11-11	639	636	0	99.53	0.47	EA-3	unnamed
2	O/ETH/3/2011	ETH11-03	639	631	0	98.75	1.25	EA-3	unnamed
3	O/ETH/4/2011	ETH11-04	639	631	0	98.75	1.25	EA-3	unnamed
4	O/ETH/5/2011	ETH11-05	639	631	0	98.75	1.25	EA-3	unnamed
5	O/ETH/9/2011	ETH11-09	639	630	0	98.59	1.41	EA-3	unnamed
6	O/ETH/10/2011	ETH11-10	639	629	0	98.44	1.56	EA-3	unnamed
7	O/ETH/45/2009	ETH09-45	639	629	0	98.44	1.56	EA-3	unnamed
8	O/ETH/7/2010	ETH10-07	639	626	0	97.97	2.03	EA-3	unnamed
9	O/ETH/8/2010	ETH10-08	639	626	0	97.97	2.03	EA-3	unnamed
10	O/ETH/7/2011	ETH11-07	639	622	0	97.34	2.66	EA-3	unnamed
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/ETH/1/2007 (FJ798137)	ETH07-01	639	593	0	92.80	7.20	EA-3	unnamed
2	O/ETH/3/2004 (FJ798109)	ETH04-03	639	586	0	91.71	8.29	EA-3	unnamed
3	O/SUD/2/86 (DQ165075)	SUD86-02	639	559	0	87.48	12.52	EA-3	unnamed
4	O/IND/R2/75* (AF204276)	IND75--A	639	550	0	86.07	13.93	ME-SA	unnamed
5	O/K83/79* (AJ303511)	KEN79B83	638	548	1	85.89	14.11	EA-1	unnamed
6	O/IND/53/79 (AF292107)	IND79A53	639	546	0	85.45	14.55	ME-SA	unnamed
7	O/UGA/5/96 (AJ296327)	UGA96-05	639	544	0	85.13	14.87	EA-1	unnamed
8	O/BHU/3/2009	BHU09-03	639	543	0	84.98	15.02	ME-SA	Ind-2001d
9	O/ETH/2/2006 (FJ798127)	ETH06-02	639	543	0	84.98	15.02	EA-3	unnamed
10	O/K40/84*	KEN84-40	639	543	0	84.98	15.02	EA-1	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Ethiopia in 2011

Batch: WRLFMD/2011/00044

◆ indicates viruses in this batch

Software: MEGA 5.0

Analysis

----- Phylogeny Reconstruction

Scope ----- All Selected Taxa

Statistical Method ----- Neighbor-joining

Phylogeny Test

----- Bootstrap method

No. of Bootstrap Replications ----- 1000

Substitution Model

----- Nucleotide

Model/Method ----- Kimura 2-parameter model

Substitutions to Include ----- d: Transitions + Transversions

Rates and Patterns

----- Uniform rates

Pattern among Lineages ----- Same (Homogeneous)

Data Subset to Use

----- Pairwise deletion

Codons Included ----- 1st+2nd+3rd+Non-Coding

No. of Sites : 642

No Of Bootstrap Reps = 1000

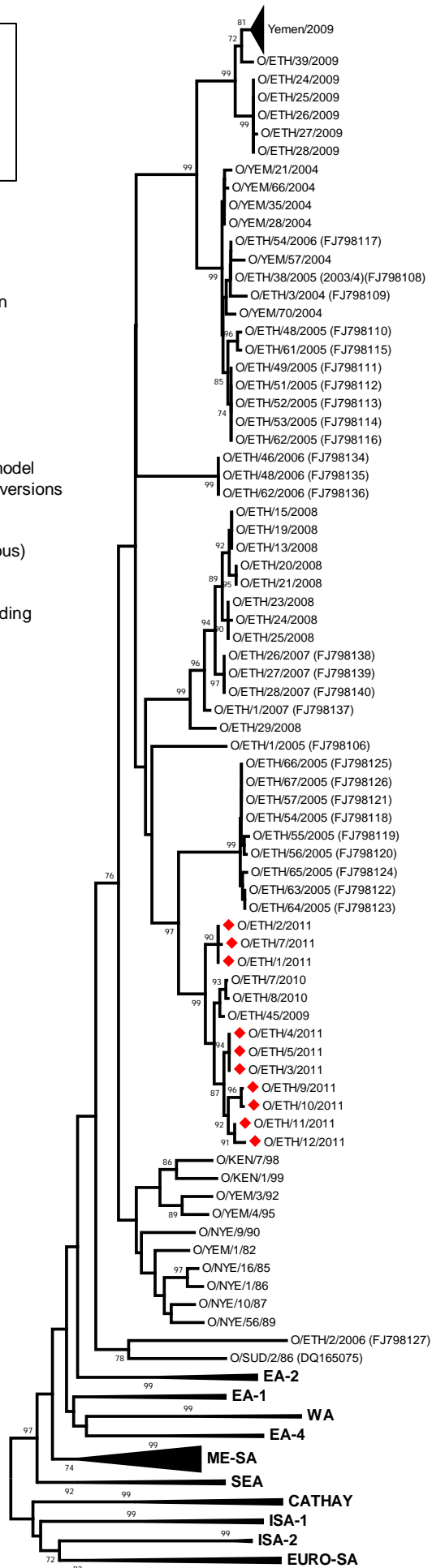
Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles & J. Wadsworth, 17 November 2011

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