

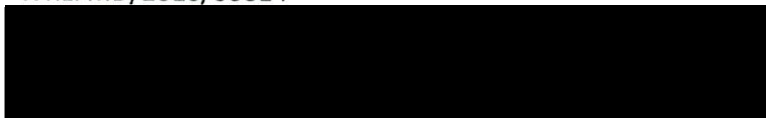


INSTITUTE FOR ANIMAL HEALTH
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Surrey,
GU24 0NF
Intn Tel: 00 44 1483 232441
Tel: 01483 232441 Fax: 01483 232621

FMD Sequencing Report

Lab Reference WRL Batch Number: WRLFMD/2010/00014

Sender Details:



Date Received: 10th March 2010

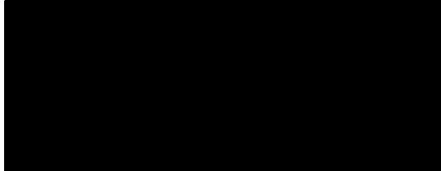
Country of Origin: Tanzania

Date Reported: 16th June 2010

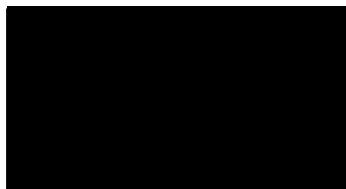
Dear Dr. Mdelumbe-Ngeleja C.A.R.,

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:

16/6/10



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)

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

Genotyping Report

Date: 18 June 2010

FMDV type O

Country: Tanzania

Period: 2008-2009

No. of isolates: 3

BATCH: WRLFMD/2010/00014



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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: 17/06/2010
WRLFMD Ref No: TAN/16/2008	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00014	Checked by: D.P. King
Sender Ref: 47 FMD TISSUE 14	
Location: Morogoro, Tanzania	Topotype: EA-2
Date collected: 25/09/2008	Genotype/strain: Unnamed
Date received by WRLFMD: 10/03/2010	Sequence filename: TAN08-16.SEQ
Date received for sequencing: 27/05/2010	Date sequence last updated: 17/06/2010
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: 2450
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 99 days
	Sequencing time: 21 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/BUN/7/2003	BUN03-07	639	592	0	92.64	7.36	EA-2	unnamed
2	O/BUN/6/2003	BUN03A06	628	581	0	92.52	7.48	EA-2	unnamed
3	O/BUN/3/2003	BUN03A03	634	586	4	92.43	7.57	EA-2	unnamed
4	O/BUN/3/2003	BUN03-03	500	462	10	92.40	7.60	EA-2	unnamed
5	O/BUN/6/2003	BUN03-06	605	557	3	92.07	7.93	EA-2	unnamed
6	O/BUN/2/2003	BUN03-02	450	414	1	92.00	8.00	EA-2	unnamed
7	O/KEN/18/98 (K82/98)	KEN98-18	384	350	17	91.15	8.85	EA-2	unnamed
8	O/TAN/12/2004	TAN04-12	639	582	0	91.08	8.92	EA-2	unnamed
9	O/TAN/2/2004	TAN04-02	639	582	0	91.08	8.92	EA-2	unnamed
10	O/TAN/3/2004	TAN04-03	639	582	0	91.08	8.92	EA-2	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/TAN/2/2004	TAN04-02	639	582	0	91.08	8.92	EA-2	unnamed
2	O/KEN/5/2002 (DQ165073)	KEN02-05	639	578	0	90.45	9.55	EA-2	unnamed
3	O/MAL/1/98 (DQ165074)	MAL98-01	639	571	0	89.36	10.64	EA-2	unnamed
4	O/UGA/3/2002 (DQ165077)	UGA02-03	638	563	1	88.24	11.76	EA-2	unnamed
5	O/ETH/1/2007 (FJ798137)	ETH07-01	639	542	0	84.82	15.18	EA-3	unnamed
6	O/K40/84*	KEN84-40	639	539	0	84.35	15.65	EA-1	unnamed
7	O/IND/53/79 (AF292107)	IND79A53	639	535	0	83.72	16.28	ME-SA	unnamed
8	O/SUD/2/86 (DQ165075)	SUD86-02	639	533	0	83.41	16.59	EA-3	unnamed
9	O/IRN/61/2001 (DQ164896)	IRN01-61	638	531	1	83.23	16.77	ME-SA	Irn-2001
10	O/K83/79* (AJ303511)	KEN79B83	638	531	1	83.23	16.77	EA-1	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: 17/06/2010
WRLFMD Ref No: TAN/5/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00014	Checked by: D.P. King
Sender Ref: 79 FMD TISSUE 46	
Location: Morogoro, Tanzania	Topotype: EA-2
Date collected: 01/05/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 10/03/2010	Sequence filename: TAN09-05.SEQ
Date received for sequencing: 27/05/2010	Date sequence last updated: 17/06/2010
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: 2450
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 99 days
	Sequencing time: 21 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/TAN/44/2009	TAN09-44	639	639	0	100.00	0.00	EA-2	Unnamed
2	O/UGA/18/2004	UGA04-18	639	621	0	97.18	2.82	EA-2	unnamed
3	O/UGA/1/2004	UGA04-01	639	619	0	96.87	3.13	EA-2	unnamed
4	O/UGA/5/2004	UGA04-05	639	619	0	96.87	3.13	EA-2	unnamed
5	O/UGA/7/2004	UGA04-07	639	619	0	96.87	3.13	EA-2	unnamed
6	O/UGA/8/2004	UGA04-08	639	619	0	96.87	3.13	EA-2	unnamed
7	O/UGA/3/2004	UGA04-03	639	618	0	96.71	3.29	EA-2	unnamed
8	O/UGA/6/2004	UGA04-06	639	618	0	96.71	3.29	EA-2	unnamed
9	O/COD/3/2006	COD06-03	639	616	0	96.40	3.60	EA-2	unnamed
10	O/COD/68/2006	COD06-68	639	616	0	96.40	3.60	EA-2	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/UGA/3/2002 (DQ165077)	UGA02-03	638	597	1	93.57	6.43	EA-2	unnamed
2	O/KEN/5/2002 (DQ165073)	KEN02-05	639	590	0	92.33	7.67	EA-2	unnamed
3	O/TAN/2/2004	TAN04-02	639	573	0	89.67	10.33	EA-2	unnamed
4	O/MAL/1/98 (DQ165074)	MAL98-01	639	572	0	89.51	10.49	EA-2	unnamed
5	O/K40/84*	KEN84-40	639	558	0	87.32	12.68	EA-1	unnamed
6	O/ETH/1/2007 (FJ798137)	ETH07-01	639	548	0	85.76	14.24	EA-3	unnamed
7	O/IRN/61/2001 (DQ164896)	IRN01-61	638	547	1	85.74	14.26	ME-SA	Irn-2001
8	O/IND/R2/75* (AF204276)	IND75--A	639	544	0	85.13	14.87	ME-SA	unnamed
9	O/PAK/16/2003 (DQ165068)	PAK03-16	639	543	0	84.98	15.02	ME-SA	Pak-98
10	O/K83/79* (AJ303511)	KEN79B83	638	542	1	84.95	15.05	EA-1	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: 17/06/2010
WRLFMD Ref No: TAN/44/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00014	Checked by: D.P. King
Sender Ref: 78 FMD TISSUE 45	
Location: Makete, Tanzania	Topotype: EA-2
Date collected: 27/10/2009	Genotype/strain: Unnamed
Date received by WRLFMD: 10/03/2010	Sequence filename: TAN09-44.SEQ
Date received for sequencing: 27/05/2010	Date sequence last updated: 17/06/2010
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: 2450
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
	Total turn-around time: 99 days
	Sequencing time: 21 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/TAN/5/2009	TAN09-05	639	639	0	100.00	0.00	EA-2	Unnamed
2	O/UGA/18/2004	UGA04-18	639	621	0	97.18	2.82	EA-2	unnamed
3	O/UGA/1/2004	UGA04-01	639	619	0	96.87	3.13	EA-2	unnamed
4	O/UGA/5/2004	UGA04-05	639	619	0	96.87	3.13	EA-2	unnamed
5	O/UGA/7/2004	UGA04-07	639	619	0	96.87	3.13	EA-2	unnamed
6	O/UGA/8/2004	UGA04-08	639	619	0	96.87	3.13	EA-2	unnamed
7	O/UGA/3/2004	UGA04-03	639	618	0	96.71	3.29	EA-2	unnamed
8	O/UGA/6/2004	UGA04-06	639	618	0	96.71	3.29	EA-2	unnamed
9	O/COD/3/2006	COD06-03	639	616	0	96.40	3.60	EA-2	unnamed
10	O/COD/68/2006	COD06-68	639	616	0	96.40	3.60	EA-2	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/UGA/3/2002 (DQ165077)	UGA02-03	638	597	1	93.57	6.43	EA-2	unnamed
2	O/KEN/5/2002 (DQ165073)	KEN02-05	639	590	0	92.33	7.67	EA-2	unnamed
3	O/TAN/2/2004	TAN04-02	639	573	0	89.67	10.33	EA-2	unnamed
4	O/MAL/1/98 (DQ165074)	MAL98-01	639	572	0	89.51	10.49	EA-2	unnamed
5	O/K40/84*	KEN84-40	639	558	0	87.32	12.68	EA-1	unnamed
6	O/ETH/1/2007 (FJ798137)	ETH07-01	639	548	0	85.76	14.24	EA-3	unnamed
7	O/IRN/61/2001 (DQ164896)	IRN01-61	638	547	1	85.74	14.26	ME-SA	Irn-2001
8	O/IND/R2/75* (AF204276)	IND75--A	639	544	0	85.13	14.87	ME-SA	unnamed
9	O/PAK/16/2003 (DQ165068)	PAK03-16	639	543	0	84.98	15.02	ME-SA	Pak-98
10	O/K83/79* (AJ303511)	KEN79B83	638	542	1	84.95	15.05	EA-1	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Tanzania in 2008-2009

Batch: WRLFMD/2010/00014

Software: MEGA 4.0
 No. of Taxa : 272
 Data File : n:\evd\meg\db\fmdv\o\KEN2010a.meg
 Data Title : O Tanzania 2008-2009 & Kenya 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 : 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, 18 June 2010

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