

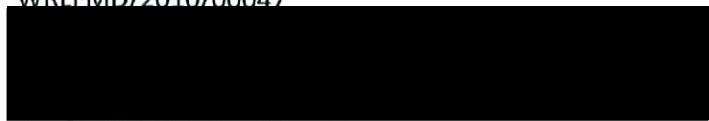


INSTITUTE FOR ANIMAL HEALTH
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Surrey,
GU24 0NF
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Tel: 01483 232441 Fax: 01483 232621

FMD Sequencing Report

Lab Reference WRL Batch Number: WRLFMD/2010/00047

Sender Details:

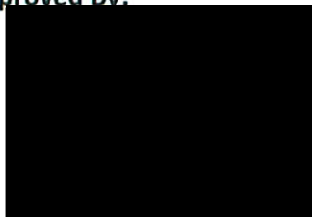


Date Received: 8th December 2010
Country of Origin: Hong Kong SAR
Date Reported: 5th January 2011

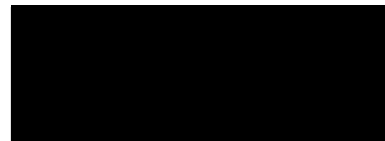
Dear Dr. Elaine Francis Lee,

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:

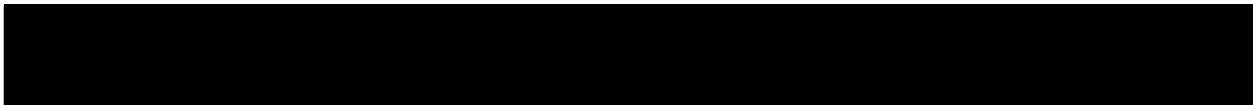


Official Stamp:



Date:

6/1/11



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

Report Date for this Batch: 22 December 2010

FMDV type O

Country: Hong Kong SAR

Period: 2010

No. of isolates: 3

BATCH: WRLFMD/2010/00047



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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: 21/12/2010
WRLFMD Ref No: HKN/24/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00047	Checked by: D.P. King
Sender Ref: D-10-5123 (1)	
Location: Not known, Hong Kong	Topotype: CATHAY
Date collected: 06/12/2010	Genotype/strain: Unnamed
Date received by WRLFMD: 08/12/2010	Sequence filename: HKN10-24.SEQ
Date received for sequencing: 19/12/2010	Date sequence last updated: 21/12/2010
Species: Pig	No. of Nt determined: 639
Material used: RS1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2531
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 13 days
	Sequencing time: 2 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/HKN/25/2010	HKN10-25	639	639	0	100.00	0.00	CATHAY	Unnamed
2	O/HKN/2/2007	HKN07-02	639	608	0	95.15	4.85	CATHAY	unnamed
3	O/HKN/1/2007	HKN07-01	639	607	0	94.99	5.01	CATHAY	unnamed
4	O/HKN/13/2004	HKN04-13	639	600	0	93.90	6.10	CATHAY	unnamed
5	O/HKN/3/2004 (DQ164881)	HKN04-03	639	599	0	93.74	6.26	CATHAY	unnamed
6	O/HKN/10/2004 (DQ164887)	HKN04-10	639	598	0	93.58	6.42	CATHAY	unnamed
7	O/HKN/11/2004 (DQ164888)	HKN04-11	639	598	0	93.58	6.42	CATHAY	unnamed
8	O/HKN/7/2004 (DQ164884)	HKN04-07	639	598	0	93.58	6.42	CATHAY	unnamed
9	O/HKN/8/2004 (DQ164885)	HKN04-08	639	598	0	93.58	6.42	CATHAY	unnamed
10	O/HKN/12/2004 (DQ164889)	HKN04-12	639	597	0	93.43	6.57	CATHAY	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/Yunlin/TAW/97 (AF308157)	TAW97--B	639	576	0	90.14	9.86	CATHAY	unnamed
2	O/PHI/7/96 (AJ294926)	PHI96-07	639	573	0	89.67	10.33	CATHAY	unnamed
3	O/HKN/6/83 (AJ294919)	HKN83-06	637	539	2	84.62	15.38	CATHAY	unnamed
4	O/HKN/21/70 (AJ294911)	HKN70A21	637	532	2	83.52	16.48	CATHAY	unnamed
5	O/IRN/61/2001 (DQ164896)	IRN01-61	638	515	1	80.72	19.28	ME-SA	Irn-2001
6	O/OMN/7/2001 (DQ164941)	OMN01-07	639	512	0	80.13	19.87	ME-SA	Ind-2001b
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	512	0	80.13	19.87	ME-SA	PanAsia-2 ^{SAN-09}
8	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	512	0	80.13	19.87	ME-SA	unnamed
9	O/IRN/88/2009	IRN09-88	639	511	0	79.97	20.03	ME-SA	PanAsia-2 ^{ANT-10}
10	O/IND/53/79 (AF292107)	IND79A53	639	509	0	79.66	20.34	ME-SA	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: 21/12/2010
WRLFMD Ref No: HKN/25/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00047	Checked by: D.P. King
Sender Ref: D-10-5123 (2)	
Location: Not known, Hong Kong	Topotype: CATHAY
Date collected: 06/12/2010	Genotype/strain: Unnamed
Date received by WRLFMD: 08/12/2010	Sequence filename: HKN10-25.SEQ
Date received for sequencing: 19/12/2010	Date sequence last updated: 21/12/2010
Species: Pig	No. of Nt determined: 639
Material used: RS1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2531
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 13 days
	Sequencing time: 2 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/HKN/24/2010	HKN10-24	639	639	0	100.00	0.00	CATHAY	Unnamed
2	O/HKN/2/2007	HKN07-02	639	608	0	95.15	4.85	CATHAY	unnamed
3	O/HKN/1/2007	HKN07-01	639	607	0	94.99	5.01	CATHAY	unnamed
4	O/HKN/13/2004	HKN04-13	639	600	0	93.90	6.10	CATHAY	unnamed
5	O/HKN/3/2004 (DQ164881)	HKN04-03	639	599	0	93.74	6.26	CATHAY	unnamed
6	O/HKN/10/2004 (DQ164887)	HKN04-10	639	598	0	93.58	6.42	CATHAY	unnamed
7	O/HKN/11/2004 (DQ164888)	HKN04-11	639	598	0	93.58	6.42	CATHAY	unnamed
8	O/HKN/7/2004 (DQ164884)	HKN04-07	639	598	0	93.58	6.42	CATHAY	unnamed
9	O/HKN/8/2004 (DQ164885)	HKN04-08	639	598	0	93.58	6.42	CATHAY	unnamed
10	O/HKN/12/2004 (DQ164889)	HKN04-12	639	597	0	93.43	6.57	CATHAY	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/Yunlin/TAW/97 (AF308157)	TAW97--B	639	576	0	90.14	9.86	CATHAY	unnamed
2	O/PHI/7/96 (AJ294926)	PHI96-07	639	573	0	89.67	10.33	CATHAY	unnamed
3	O/HKN/6/83 (AJ294919)	HKN83-06	637	539	2	84.62	15.38	CATHAY	unnamed
4	O/HKN/21/70 (AJ294911)	HKN70A21	637	532	2	83.52	16.48	CATHAY	unnamed
5	O/IRN/61/2001 (DQ164896)	IRN01-61	638	515	1	80.72	19.28	ME-SA	Irn-2001
6	O/OMN/7/2001 (DQ164941)	OMN01-07	639	512	0	80.13	19.87	ME-SA	Ind-2001b
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	512	0	80.13	19.87	ME-SA	PanAsia-2 ^{SAN-09}
8	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	512	0	80.13	19.87	ME-SA	unnamed
9	O/IRN/88/2009	IRN09-88	639	511	0	79.97	20.03	ME-SA	PanAsia-2 ^{ANT-10}
10	O/IND/53/79 (AF292107)	IND79A53	639	509	0	79.66	20.34	ME-SA	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 21/12/2010
WRLFMD Ref No: HKN/26/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00047	Checked by: D.P. King
Sender Ref: D-10-5123 (3)	
Location: Not known, Hong Kong	Topotype: CATHAY
Date collected: 06/12/2010	Genotype/strain: Unnamed
Date received by WRLFMD: 08/12/2010	Sequence filename: HKN10-26.SEQ
Date received for sequencing: 19/12/2010	Date sequence last updated: 21/12/2010
Species: Pig	No. of Nt determined: 639
Material used: RS2	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2531
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 13 days
	Sequencing time: 2 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/HKN/3/2008	HKN08-03	639	621	0	97.18	2.82	CATHAY	unnamed
2	O/HKN/1/2008	HKN08-01	639	618	0	96.71	3.29	CATHAY	unnamed
3	O/HKN/2/2008	HKN08-02	639	618	0	96.71	3.29	CATHAY	unnamed
4	O/HKN/1/2009	HKN09-01	639	615	0	96.24	3.76	CATHAY	unnamed
5	O/HKN/2/2009	HKN09-02	639	615	0	96.24	3.76	CATHAY	unnamed
6	O/HKN/4/2008	HKN08-04	639	615	0	96.24	3.76	CATHAY	unnamed
7	O/HKN/4/2007	HKN07-04	639	613	0	95.93	4.07	CATHAY	unnamed
8	O/HKN/3/2007	HKN07-03	639	611	0	95.62	4.38	CATHAY	unnamed
9	O/HKN/2/2006	HKN06-02	639	606	0	94.84	5.16	CATHAY	unnamed
10	O/HKN/4/2006	HKN06-04	639	606	0	94.84	5.16	CATHAY	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/Yunlin/TAW/97 (AF308157)	TAW97--B	639	572	0	89.51	10.49	CATHAY	unnamed
2	O/PHI/7/96 (AJ294926)	PHI96-07	639	568	0	88.89	11.11	CATHAY	unnamed
3	O/HKN/6/83 (AJ294919)	HKN83-06	637	548	2	86.03	13.97	CATHAY	unnamed
4	O/HKN/21/70 (AJ294911)	HKN70A21	637	524	2	82.26	17.74	CATHAY	unnamed
5	O/IND/53/79 (AF292107)	IND79A53	639	512	0	80.13	19.87	ME-SA	unnamed
6	O/IRN/61/2001 (DQ164896)	IRN01-61	638	507	1	79.47	20.53	ME-SA	Irn-2001
7	O1/Manisa/TUR/69 (AY593823)	TUR69--G	639	506	0	79.19	20.81	ME-SA	unnamed
8	O/MAL/1/98 (DQ165074)	MAL98-01	639	505	0	79.03	20.97	EA-2	unnamed
9	O/UGA/17/98 (HM211075)	UGA98-17	639	505	0	79.03	20.97	EA-4	unnamed
10	O/ISA/9/74 (AJ303502)	ISA74-09	639	504	0	78.87	21.13	ISA-1	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Hong Kong SAR in 2010

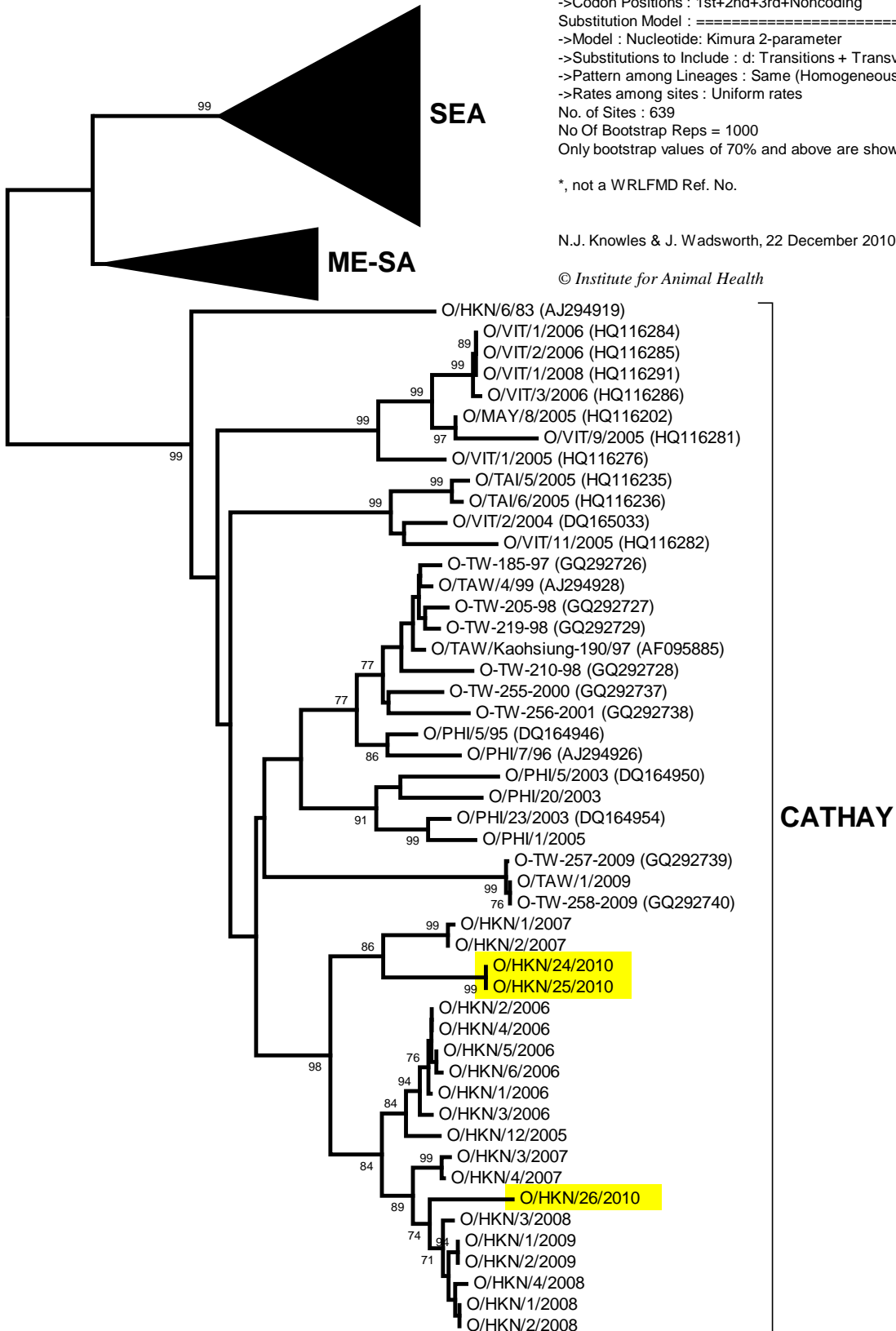
Batch: WRLFMD/2010/00047

Software: MEGA 4.0
 No. of Taxa : 159
 Data File : n:\evd\meg\db\fmv\o\HKN2010c.meg
 Data Title : O Hong Kong 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, 22 December 2010

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