

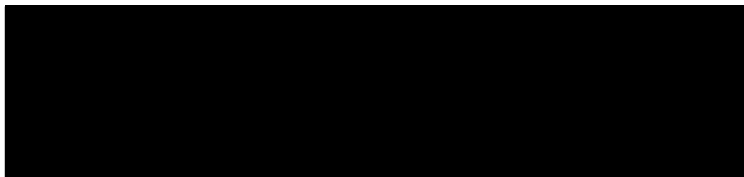


INSTITUTE FOR ANIMAL HEALTH
Director: Professor John Fazakerley BSc, MBA, PhD, FRCPath
PIRBRIGHT LABORATORY
Ash Road,
Pirbright,
Surrey,
GU24 0NF
Intn Tel: 00 44 1483 232441
Tel: 01483 232441 Fax: 01483 232621

FMD Genotyping Report

Lab Reference WRL Batch Number: WRLFMD/2012/00011

Sender Details:

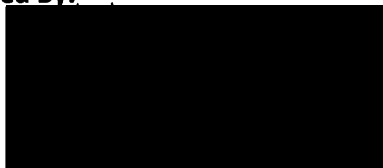


Date Received: 12th March 2012
Country of Origin: Egypt
Date Reported: 10th April 2012

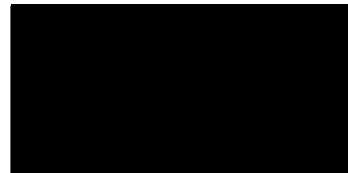
Dear Dr Soheir Hassan Abd El Kader

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/>

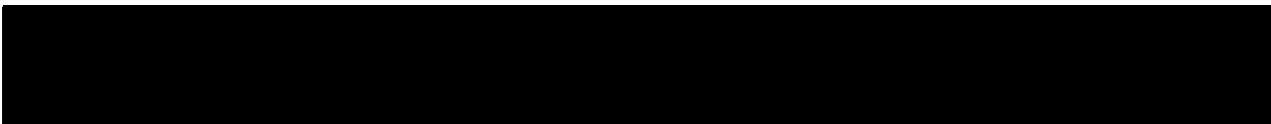
Results Approved By:



Official Stamp:



Date: 10 / 4 / 12



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: 5 April 2012

FMDV type O

Country: Egypt

Period: 2011

No. of samples: 3

BATCH: WRLFMD/2012/00011



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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: 05/04/2012
WRLFMD Ref No: EGY/6/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00011	Checked by: D.P. King
Sender Ref: C/559 S/N 9	
Location: Memofia Shebeen, Egypt	Topotype: ME-SA
Date collected: 21/04/2011	Genotype/strain: PanAsia-2
Date received by WRLFMD: 12/03/2012	Sequence filename: EGY11-06.SEQ
Date received for sequencing: 04/04/2012	Date sequence last updated: 05/04/2012
Species: Not Known	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: 3243
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 1 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/EGY/7/2011	EGY11-07	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/EGY/10/2011	EGY11-10	639	627	0	98.12	1.88	ME-SA	PanAsia-2
3	O/EQ57/EGY/2009 (AHRI)	EGY09-AB	639	618	0	96.71	3.29	ME-SA	PanAsia-2
4	O/IRN/50/2006	IRN06-50	639	613	0	95.93	4.07	ME-SA	PanAsia-2
5	O/IRN/56/2006	IRN06-56	639	613	0	95.93	4.07	ME-SA	PanAsia-2
6	O/IRN/11/2006	IRN06-11	639	612	0	95.77	4.23	ME-SA	PanAsia-2
7	O/IRN/23/2006	IRN06-23	639	612	0	95.77	4.23	ME-SA	PanAsia-2
8	O/IRN/29/2006	IRN06-29	639	612	0	95.77	4.23	ME-SA	PanAsia-2
9	O/IRN/43/2006	IRN06-43	639	612	0	95.77	4.23	ME-SA	PanAsia-2
10	O/JOR/6/2006 (FJ561317)	JOR06-06	639	612	0	95.77	4.23	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/TUR/257/2008* (FMDI)	TUR08-AD	639	607	0	94.99	5.01	ME-SA	PanAsia-2 ^{TER-08}
2	O/IRN/31/2009	IRN09-31	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{FAR-09}
3	O/IRN/8/2005	IRN05-08	639	602	0	94.21	5.79	ME-SA	PanAsia-2
4	O/IRN/18/2010	IRN10-18	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{BAL-09}
5	O/IRN/88/2009	IRN09-88	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{ANT-10}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	598	0	93.58	6.42	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	591	0	92.49	7.51	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	581	0	90.92	9.08	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	575	0	89.98	10.02	ME-SA	Ind-2001a
10	O/IRN/61/2001 (DQ164896)	IRN01-61	638	567	1	88.87	11.13	ME-SA	Iran-2001

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: 05/04/2012
WRLFMD Ref No: EGY/7/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00011	Checked by: D.P. King
Sender Ref: C/559 S/N 10	
Location: Memofia Shebeen, Egypt	Topotype: ME-SA
Date collected: 21/04/2011	Genotype/strain: PanAsia-2
Date received by WRLFMD: 12/03/2012	Sequence filename: EGY11-07.SEQ
Date received for sequencing: 04/04/2012	Date sequence last updated: 05/04/2012
Species: Not Known	No. of Nt determined: 639
Material used: BTy3	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3243
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 1 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/EGY/6/2011	EGY11-06	639	639	0	100.00	0.00	ME-SA	PanAsia-2
2	O/EGY/10/2011	EGY11-10	639	627	0	98.12	1.88	ME-SA	PanAsia-2
3	O/EQ57/EGY/2009 (AHRI)	EGY09-AB	639	618	0	96.71	3.29	ME-SA	PanAsia-2
4	O/IRN/50/2006	IRN06-50	639	613	0	95.93	4.07	ME-SA	PanAsia-2
5	O/IRN/56/2006	IRN06-56	639	613	0	95.93	4.07	ME-SA	PanAsia-2
6	O/IRN/11/2006	IRN06-11	639	612	0	95.77	4.23	ME-SA	PanAsia-2
7	O/IRN/23/2006	IRN06-23	639	612	0	95.77	4.23	ME-SA	PanAsia-2
8	O/IRN/29/2006	IRN06-29	639	612	0	95.77	4.23	ME-SA	PanAsia-2
9	O/IRN/43/2006	IRN06-43	639	612	0	95.77	4.23	ME-SA	PanAsia-2
10	O/JOR/6/2006 (FJ561317)	JOR06-06	639	612	0	95.77	4.23	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/TUR/257/2008* (FMDI)	TUR08-AD	639	607	0	94.99	5.01	ME-SA	PanAsia-2 ^{TER-08}
2	O/IRN/31/2009	IRN09-31	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{FAR-09}
3	O/IRN/8/2005	IRN05-08	639	602	0	94.21	5.79	ME-SA	PanAsia-2
4	O/IRN/18/2010	IRN10-18	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{BAL-09}
5	O/IRN/88/2009	IRN09-88	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{ANT-10}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	598	0	93.58	6.42	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	591	0	92.49	7.51	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	581	0	90.92	9.08	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	575	0	89.98	10.02	ME-SA	Ind-2001a
10	O/IRN/61/2001 (DQ164896)	IRN01-61	638	567	1	88.87	11.13	ME-SA	Iran-2001

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	Report date: 05/04/2012
WRLFMD Ref No: EGY/10/2011	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00011	Checked by: D.P. King
Sender Ref: G/24 S/N 13	
Location: Suze- Amer, Egypt	Topotype: ME-SA
Date collected: 13/07/2011	Genotype/strain: PanAsia-2
Date received by WRLFMD: 12/03/2012	Sequence filename: EGY11-10.SEQ
Date received for sequencing: 04/04/2012	Date sequence last updated: 05/04/2012
Species: Not Known	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: 3243
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 1 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/EGY/6/2011	EGY11-06	639	627	0	98.12	1.88	ME-SA	PanAsia-2
2	O/EGY/7/2011	EGY11-07	639	627	0	98.12	1.88	ME-SA	PanAsia-2
3	O/EQ57/EGY/2009 (AHRI)	EGY09-AB	639	616	0	96.40	3.60	ME-SA	PanAsia-2
4	O/IRN/50/2006	IRN06-50	639	613	0	95.93	4.07	ME-SA	PanAsia-2
5	O/IRN/56/2006	IRN06-56	639	611	0	95.62	4.38	ME-SA	PanAsia-2
6	O/IRN/11/2006	IRN06-11	639	610	0	95.46	4.54	ME-SA	PanAsia-2
7	O/IRN/23/2006	IRN06-23	639	610	0	95.46	4.54	ME-SA	PanAsia-2
8	O/IRN/29/2006	IRN06-29	639	610	0	95.46	4.54	ME-SA	PanAsia-2
9	O/IRN/43/2006	IRN06-43	639	610	0	95.46	4.54	ME-SA	PanAsia-2
10	O/IRN/51/2006	IRN06-51	639	610	0	95.46	4.54	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/TUR/257/2008* (FMDI)	TUR08-AD	639	604	0	94.52	5.48	ME-SA	PanAsia-2 ^{TER-08}
2	O/IRN/31/2009	IRN09-31	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{FAR-09}
3	O/IRN/8/2005	IRN05-08	639	600	0	93.90	6.10	ME-SA	PanAsia-2
4	O/IRN/18/2010	IRN10-18	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{BAL-09}
5	O/TUR/264/2009* (FMDI)	TUR09-AK	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{SAN-09}
6	O/IRN/88/2009	IRN09-88	639	595	0	93.11	6.89	ME-SA	PanAsia-2 ^{ANT-10}
7	O/PAK/16/2010	PAK10-16	639	589	0	92.18	7.82	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	580	0	90.77	9.23	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	573	0	89.67	10.33	ME-SA	Ind-2001a
10	O/IRN/61/2001 (DQ164896)	IRN01-61	638	565	1	88.56	11.44	ME-SA	Iran-2001

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Egypt in 2011

Batch: WRLFMD/2012/00011

◆ 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, 05 April 2012

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PanAsia-2

ME-SA

ANT-10

TER-08

SAN-09

FAR-09

BAL-09

PUN-10

PanAsia

0.02