

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

Genotyping Report

Report Date for this Batch: 7 August 2014

FMDV type A

Country: Laos

Period: 2014

No. of samples: 3

BATCH: WRLFMD/2014/00023



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 07/08/2014
WRLFMD Ref No: LAO/1/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00023	Checked by: K. Bachanek-Bankowska
Sender Ref: LAO 1/14 R1B2	
Location: Champasak Province, Laos	Topotype: ASIA
Date collected: 20/02/2014	Genotype/strain: Sea-97
Date received by WRLFMD: 19/06/2014	Sequence filename: LAO14-01.SEQ
Date received for sequencing: 01/08/2014	Date sequence last updated: 05/08/2014
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 29/07/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1981
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
	Sequencing time: 6 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/LAO/2/2014	LAO14-02	636	636	0	100.00	0.00	ASIA	Sea-97
2	A/LAO/3/2014	LAO14-03	636	634	0	99.69	0.31	ASIA	Sea-97
3	A/TAI/17/2013	TAI13-17	636	632	0	99.37	0.63	ASIA	Sea-97
4	A/TAI/20/2013	TAI13-20	636	632	0	99.37	0.63	ASIA	Sea-97
5	A/TAI/21/2013	TAI13-21	636	632	0	99.37	0.63	ASIA	Sea-97
6	A/TAI/3/2014	TAI14-03	636	631	0	99.21	0.79	ASIA	Sea-97
7	A/VIT/58/2013	VIT13-58	633	628	0	99.21	0.79	ASIA	Sea-97
8	A/TAI/1/2014	TAI14-01	636	629	0	98.90	1.10	ASIA	Sea-97
9	A/TAI/2/2014	TAI14-02	636	629	0	98.90	1.10	ASIA	Sea-97
10	A/VIT/42/2013	VIT13-42	633	625	0	98.74	1.26	ASIA	Sea-97
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	A/TAI/7/2003 (HQ116312)	TAI03-07	633	587	0	92.73	7.27	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	633	571	0	90.21	9.79	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	633	557	0	87.99	12.01	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	520	0	81.76	18.24	ASIA	A ₂₂
5	A/IRN/2/87 (EF208770)	IRN87-02	633	517	0	81.67	18.33	ASIA	Iran-87
6	A/IRN/1/2011	IRN11-01	636	518	0	81.45	18.55	ASIA	Iran-05 ^{FAR-11}
7	A/GHA/16/73 (KF561698)	GHA73-16	633	512	0	80.88	19.12	AFRICA	G-VI
8	A/IRN/1/96 (EF208771)	IRN96-01	635	513	1	80.79	19.21	ASIA	Iran-96
9	A5/Allier/FRA/60 (AY593780)	FRA60--F	633	511	0	80.73	19.27	EURO-SA	A ₅
10	A/UGA/13/66 (KF561705)	UGA66-13	636	513	0	80.66	19.34	AFRICA	G-VII

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 07/08/2014
WRLFMD Ref No: LAO/2/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00023	Checked by: K. Bachanek-Bankowska
Sender Ref: LAO 2/14 B4	
Location: Champasak Province, Laos	Topotype: ASIA
Date collected: 20/02/2014	Genotype/strain: Sea-97
Date received by WRLFMD: 19/06/2014	Sequence filename: LAO14-02.SEQ
Date received for sequencing: 01/08/2014	Date sequence last updated: 05/08/2014
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 29/07/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1981
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 49 days
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2	A/LAO/3/2014	LAO14-03	636	634	0	99.69	0.31	ASIA	Sea-97
3	A/TAI/17/2013	TAI13-17	636	632	0	99.37	0.63	ASIA	Sea-97
4	A/TAI/20/2013	TAI13-20	636	632	0	99.37	0.63	ASIA	Sea-97
5	A/TAI/21/2013	TAI13-21	636	632	0	99.37	0.63	ASIA	Sea-97
6	A/TAI/3/2014	TAI14-03	636	631	0	99.21	0.79	ASIA	Sea-97
7	A/VIT/58/2013	VIT13-58	633	628	0	99.21	0.79	ASIA	Sea-97
8	A/TAI/1/2014	TAI14-01	636	629	0	98.90	1.10	ASIA	Sea-97
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Batch No: WRLFMD/2014/00023	Checked by: K. Bachanek-Bankowska
Sender Ref: LAO 5/14 B3	
Location: Champasak Province, Laos	Topotype: ASIA
Date collected: 20/02/2014	Genotype/strain: Sea-97
Date received by WRLFMD: 19/06/2014	Sequence filename: LAO14-03.SEQ
Date received for sequencing: 01/08/2014	Date sequence last updated: 05/08/2014
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 29/07/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1981
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3	A/TAI/17/2013	TAI13-17	636	632	0	99.37	0.63	ASIA	Sea-97
4	A/TAI/20/2013	TAI13-20	636	632	0	99.37	0.63	ASIA	Sea-97
5	A/TAI/21/2013	TAI13-21	636	632	0	99.37	0.63	ASIA	Sea-97
6	A/TAI/3/2014	TAI14-03	636	631	0	99.21	0.79	ASIA	Sea-97
7	A/VIT/58/2013	VIT13-58	633	628	0	99.21	0.79	ASIA	Sea-97
8	A/TAI/1/2014	TAI14-01	636	629	0	98.90	1.10	ASIA	Sea-97
9	A/TAI/2/2014	TAI14-02	636	629	0	98.90	1.10	ASIA	Sea-97
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7	A/IRN/1/96 (EF208771)	IRN96-01	635	515	1	81.10	18.90	ASIA	Iran-96
8	A/GHA/16/73 (KF561698)	GHA73-16	633	512	0	80.88	19.12	AFRICA	G-VI
9	A/BAR/6/2008 (FJ755010)	BAR08-06	636	514	0	80.82	19.18	ASIA	Iran-05 ^{BAR-08}
10	A/IRN/78/2009	IRN09-78	636	514	0	80.82	19.18	ASIA	Iran-05 ^{FAR-09}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV A in Laos in 2014

Batch: WRLFMD/2014/00023

◆ indicates viruses in this batch

Software: MEGA 6.06

Analysis

Analysis ----- Phylogeny Reconstruction

Scope ----- All Selected Taxa

Statistical Method ----- Neighbor-joining

Phylogeny Test

Test of Phylogeny ----- Bootstrap method

No. of Bootstrap Replications ----- 1000

Substitution Model

Substitutions Type ----- Nucleotide

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

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

Rates and Patterns

Rates among Sites ----- Uniform rates

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

Data Subset to Use

Gaps/Missing Data Treatment ----- Pairwise deletion

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

No. of Sites : 639

No Of Bootstrap Reps = 1000

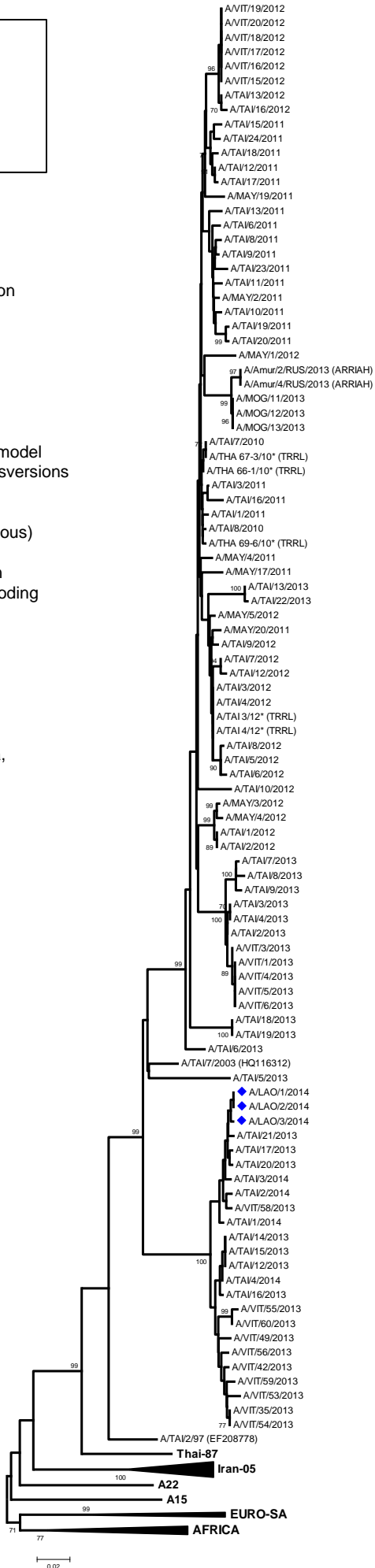
Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & K. Bachanek-Bankowska,
07 August 2014

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Sea-97

ASIA

0.02