

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

Genotyping Report

Report Date for this Batch: 27 July 2015

FMDV type A

Country: Pakistan

Period: 2015

No. of samples: 7

BATCH: WRLFMD/2015/00013



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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A	Report date: 27/07/2015
WRLFMD Ref No: PAK/12/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00013	Checked by: K. Bachanek-Bankowska
Sender Ref: PK04	
Location: Faisalabad, Punjab, Pakistan	Topotype: ASIA
Date collected: 15/01/2015	Genotype/strain: Iran-05 ^{FAR-11}
Date received by WRLFMD: 16/07/2015	Sequence filename: PAK15-12.SEQ
Date received for sequencing: 24/07/2015	Date sequence last updated: 27/07/2015
Species: Water Buffalo	No. of Nt determined: 639
Material used: BTY1 18/07/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2040
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 11 days
	Sequencing time: 3 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/PAK/21/2015	PAK15-21	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
2	A/PAK/28/2014	PAK14-28	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
3	A/PAK/33/2014	PAK14-33	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
4	A/PAK/41/2014	PAK14-41	639	634	0	99.22	0.78	ASIA	Iran-05 ^{FAR-11}
5	A/PAK/43/2014	PAK14-43	639	634	0	99.22	0.78	ASIA	Iran-05 ^{FAR-11}
6	A/PAK/17/2015	PAK15-17	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
7	A/PAK/20/2015	PAK15-20	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
8	A/PAK/10/2015	PAK15-10	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
9	A/PAK/13/2015	PAK15-13	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
10	A/PAK/15/2015	PAK15-15	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
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/IRN/1/2011	IRN11-01	639	614	0	96.09	3.91	ASIA	Iran-05 ^{FAR-11}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	603	0	94.37	5.63	ASIA	Iran-05 ^{AFG-07}
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	599	0	93.74	6.26	ASIA	Iran-05 ^{BAR-08}
4	A/IRN/1/2005 (EF208769)	IRN05-01	639	597	0	93.43	6.57	ASIA	Iran-05
5	A/AFG/10/2010	AFG10-10	639	596	0	93.27	6.73	ASIA	Iran-05 ^{HER-10}
6	A/IRN/15/2012	IRN12-15	639	596	0	93.27	6.73	ASIA	Iran-05 ^{SIS-12}
7	A/IRN/78/2009	IRN09-78	639	595	0	93.11	6.89	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/125/2010	IRN10125	639	594	0	92.96	7.04	ASIA	Iran-05 ^{SIS-10}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	592	0	92.64	7.36	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	588	0	92.02	7.98	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 27/07/2015
WRLFMD Ref No: PAK/13/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00013	Checked by: K. Bachanek-Bankowska
Sender Ref: PK06	
Location: Multan, Punjab, Pakistan	Topotype: ASIA
Date collected: 28/01/2015	Genotype/strain: Iran-05 ^{FAR-11}
Date received by WRLFMD: 16/07/2015	Sequence filename: PAK15-13.SEQ
Date received for sequencing: 24/07/2015	Date sequence last updated: 27/07/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 18/07/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2040
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 11 days
	Sequencing time: 3 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/PAK/10/2015	PAK15-10	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
2	A/PAK/15/2015	PAK15-15	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
3	A/PAK/16/2015	PAK15-16	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
4	A/PAK/17/2015	PAK15-17	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
5	A/PAK/20/2015	PAK15-20	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
6	A/PAK/41/2014	PAK14-41	639	635	0	99.37	0.63	ASIA	Iran-05 ^{FAR-11}
7	A/PAK/43/2014	PAK14-43	639	635	0	99.37	0.63	ASIA	Iran-05 ^{FAR-11}
8	A/PAK/33/2014	PAK14-33	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
9	A/PAK/12/2015	PAK15-12	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
10	A/PAK/21/2015	PAK15-21	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
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/IRN/1/2011	IRN11-01	639	615	0	96.24	3.76	ASIA	Iran-05 ^{FAR-11}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	604	0	94.52	5.48	ASIA	Iran-05 ^{AFG-07}
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	598	0	93.58	6.42	ASIA	Iran-05 ^{BAR-08}
4	A/AFG/10/2010	AFG10-10	639	597	0	93.43	6.57	ASIA	Iran-05 ^{HER-10}
5	A/IRN/15/2012	IRN12-15	639	597	0	93.43	6.57	ASIA	Iran-05 ^{SIS-12}
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	596	0	93.27	6.73	ASIA	Iran-05
7	A/IRN/78/2009	IRN09-78	639	596	0	93.27	6.73	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/125/2010	IRN10125	639	593	0	92.80	7.20	ASIA	Iran-05 ^{SIS-10}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	592	0	92.64	7.36	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	589	0	92.18	7.82	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 27/07/2015
WRLFMD Ref No: PAK/15/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00013	Checked by: K. Bachanek-Bankowska
Sender Ref: PK05	
Location: Bhakkar, Punjab, Pakistan	Topotype: ASIA
Date collected: 30/01/2015	Genotype/strain: Iran-05 ^{FAR-11}
Date received by WRLFMD: 16/07/2015	Sequence filename: PAK15-15.SEQ
Date received for sequencing: 24/07/2015	Date sequence last updated: 27/07/2015
Species: Water Buffalo	No. of Nt determined: 639
Material used: BTY1 18/07/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2040
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 11 days
	Sequencing time: 3 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/PAK/10/2015	PAK15-10	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
2	A/PAK/13/2015	PAK15-13	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
3	A/PAK/16/2015	PAK15-16	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
4	A/PAK/17/2015	PAK15-17	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
5	A/PAK/20/2015	PAK15-20	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
6	A/PAK/41/2014	PAK14-41	639	635	0	99.37	0.63	ASIA	Iran-05 ^{FAR-11}
7	A/PAK/43/2014	PAK14-43	639	635	0	99.37	0.63	ASIA	Iran-05 ^{FAR-11}
8	A/PAK/33/2014	PAK14-33	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
9	A/PAK/12/2015	PAK15-12	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
10	A/PAK/21/2015	PAK15-21	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
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/IRN/1/2011	IRN11-01	639	615	0	96.24	3.76	ASIA	Iran-05 ^{FAR-11}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	604	0	94.52	5.48	ASIA	Iran-05 ^{AFG-07}
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	598	0	93.58	6.42	ASIA	Iran-05 ^{BAR-08}
4	A/AFG/10/2010	AFG10-10	639	597	0	93.43	6.57	ASIA	Iran-05 ^{HER-10}
5	A/IRN/15/2012	IRN12-15	639	597	0	93.43	6.57	ASIA	Iran-05 ^{SIS-12}
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	596	0	93.27	6.73	ASIA	Iran-05
7	A/IRN/78/2009	IRN09-78	639	596	0	93.27	6.73	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/125/2010	IRN10125	639	593	0	92.80	7.20	ASIA	Iran-05 ^{SIS-10}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	592	0	92.64	7.36	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	589	0	92.18	7.82	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

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Serotype: A WRLFMD Ref No: PAK/16/2015 Batch No: WRLFMD/2015/00013 Sender Ref: PK07 Location: Muzaffarabad, Azad Jammu and Kashmir, Pakistan Date collected: 28/02/2015 Date received by WRLFMD: 16/07/2015 Date received for sequencing: 24/07/2015 Species: Cattle Material used: BTY1 18/07/2015 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 27/07/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ASIA Genotype/strain: Iran-05 ^{FAR-11} Sequence filename: PAK15-16.SEQ Date sequence last updated: 27/07/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2040 Min. no. of nt for comparison: 600 Total turn-around time: 11 days Sequencing time: 3 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/PAK/10/2015	PAK15-10	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
2	A/PAK/13/2015	PAK15-13	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
3	A/PAK/15/2015	PAK15-15	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
4	A/PAK/17/2015	PAK15-17	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
5	A/PAK/20/2015	PAK15-20	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
6	A/PAK/41/2014	PAK14-41	639	635	0	99.37	0.63	ASIA	Iran-05 ^{FAR-11}
7	A/PAK/43/2014	PAK14-43	639	635	0	99.37	0.63	ASIA	Iran-05 ^{FAR-11}
8	A/PAK/33/2014	PAK14-33	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
9	A/PAK/12/2015	PAK15-12	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
10	A/PAK/21/2015	PAK15-21	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
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2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	604	0	94.52	5.48	ASIA	Iran-05 ^{AFG-07}
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	598	0	93.58	6.42	ASIA	Iran-05 ^{BAR-08}
4	A/AFG/10/2010	AFG10-10	639	597	0	93.43	6.57	ASIA	Iran-05 ^{HER-10}
5	A/IRN/15/2012	IRN12-15	639	597	0	93.43	6.57	ASIA	Iran-05 ^{SIS-12}
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	596	0	93.27	6.73	ASIA	Iran-05
7	A/IRN/78/2009	IRN09-78	639	596	0	93.27	6.73	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/125/2010	IRN10125	639	593	0	92.80	7.20	ASIA	Iran-05 ^{SIS-10}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	592	0	92.64	7.36	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	589	0	92.18	7.82	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 27/07/2015
WRLFMD Ref No: PAK/17/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00013	Checked by: K. Bachanek-Bankowska
Sender Ref: PK01	
Location: Khanewal, Punjab, Pakistan	Topotype: ASIA
Date collected: 02/04/2015	Genotype/strain: Iran-05 ^{FAR-11}
Date received by WRLFMD: 16/07/2015	Sequence filename: PAK15-17.SEQ
Date received for sequencing: 24/07/2015	Date sequence last updated: 27/07/2015
Species: Water Buffalo	No. of Nt determined: 639
Material used: BTY1 18/07/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2040
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 11 days
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3	A/PAK/13/2015	PAK15-13	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
4	A/PAK/15/2015	PAK15-15	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
5	A/PAK/16/2015	PAK15-16	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
6	A/PAK/41/2014	PAK14-41	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
7	A/PAK/43/2014	PAK14-43	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
8	A/PAK/33/2014	PAK14-33	639	634	0	99.22	0.78	ASIA	Iran-05 ^{FAR-11}
9	A/PAK/12/2015	PAK15-12	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
10	A/PAK/21/2015	PAK15-21	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
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3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	599	0	93.74	6.26	ASIA	Iran-05 ^{BAR-08}
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7	A/IRN/78/2009	IRN09-78	639	597	0	93.43	6.57	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/125/2010	IRN10125	639	594	0	92.96	7.04	ASIA	Iran-05 ^{SIS-10}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	593	0	92.80	7.20	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	590	0	92.33	7.67	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 27/07/2015
WRLFMD Ref No: PAK/20/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00013	Checked by: K. Bachanek-Bankowska
Sender Ref: PK02	
Location: Faisalabad, Punjab, Pakistan	Topotype: ASIA
Date collected: 06/05/2015	Genotype/strain: Iran-05 ^{FAR-11}
Date received by WRLFMD: 16/07/2015	Sequence filename: PAK15-20.SEQ
Date received for sequencing: 24/07/2015	Date sequence last updated: 27/07/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 18/07/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2040
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 11 days
	Sequencing time: 3 days
Comments:	

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3	A/PAK/13/2015	PAK15-13	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
4	A/PAK/15/2015	PAK15-15	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
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6	A/PAK/41/2014	PAK14-41	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
7	A/PAK/43/2014	PAK14-43	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
8	A/PAK/33/2014	PAK14-33	639	634	0	99.22	0.78	ASIA	Iran-05 ^{FAR-11}
9	A/PAK/12/2015	PAK15-12	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
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(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/IRN/1/2011	IRN11-01	639	616	0	96.40	3.60	ASIA	Iran-05 ^{FAR-11}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	605	0	94.68	5.32	ASIA	Iran-05 ^{AFG-07}
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	599	0	93.74	6.26	ASIA	Iran-05 ^{BAR-08}
4	A/AFG/10/2010	AFG10-10	639	598	0	93.58	6.42	ASIA	Iran-05 ^{HER-10}
5	A/IRN/15/2012	IRN12-15	639	598	0	93.58	6.42	ASIA	Iran-05 ^{SIS-12}
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	597	0	93.43	6.57	ASIA	Iran-05
7	A/IRN/78/2009	IRN09-78	639	597	0	93.43	6.57	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/125/2010	IRN10125	639	594	0	92.96	7.04	ASIA	Iran-05 ^{SIS-10}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	593	0	92.80	7.20	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	590	0	92.33	7.67	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 27/07/2015
WRLFMD Ref No: PAK/21/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00013	Checked by: K. Bachanek-Bankowska
Sender Ref: PK03	
Location: Gujrat, Punjab, Pakistan	Topotype: ASIA
Date collected: 08/06/2015	Genotype/strain: Iran-05 ^{FAR-11}
Date received by WRLFMD: 16/07/2015	Sequence filename: PAK15-21.SEQ
Date received for sequencing: 24/07/2015	Date sequence last updated: 27/07/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY2 21/07/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2040
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 11 days
	Sequencing time: 3 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/PAK/12/2015	PAK15-12	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
2	A/PAK/28/2014	PAK14-28	639	639	0	100.00	0.00	ASIA	Iran-05 ^{FAR-11}
3	A/PAK/33/2014	PAK14-33	639	636	0	99.53	0.47	ASIA	Iran-05 ^{FAR-11}
4	A/PAK/41/2014	PAK14-41	639	634	0	99.22	0.78	ASIA	Iran-05 ^{FAR-11}
5	A/PAK/43/2014	PAK14-43	639	634	0	99.22	0.78	ASIA	Iran-05 ^{FAR-11}
6	A/PAK/17/2015	PAK15-17	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
7	A/PAK/20/2015	PAK15-20	639	633	0	99.06	0.94	ASIA	Iran-05 ^{FAR-11}
8	A/PAK/10/2015	PAK15-10	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
9	A/PAK/13/2015	PAK15-13	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
10	A/PAK/15/2015	PAK15-15	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-11}
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/IRN/1/2011	IRN11-01	639	614	0	96.09	3.91	ASIA	Iran-05 ^{FAR-11}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	603	0	94.37	5.63	ASIA	Iran-05 ^{AFG-07}
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	599	0	93.74	6.26	ASIA	Iran-05 ^{BAR-08}
4	A/IRN/1/2005 (EF208769)	IRN05-01	639	597	0	93.43	6.57	ASIA	Iran-05
5	A/AFG/10/2010	AFG10-10	639	596	0	93.27	6.73	ASIA	Iran-05 ^{HER-10}
6	A/IRN/15/2012	IRN12-15	639	596	0	93.27	6.73	ASIA	Iran-05 ^{SIS-12}
7	A/IRN/78/2009	IRN09-78	639	595	0	93.11	6.89	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/125/2010	IRN10125	639	594	0	92.96	7.04	ASIA	Iran-05 ^{SIS-10}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	592	0	92.64	7.36	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	588	0	92.02	7.98	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV A in Pakistan in 2015

Batch: WRLFMD/2015/00013

◆ indicates viruses in this batch

Software: MEGA 6.06

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

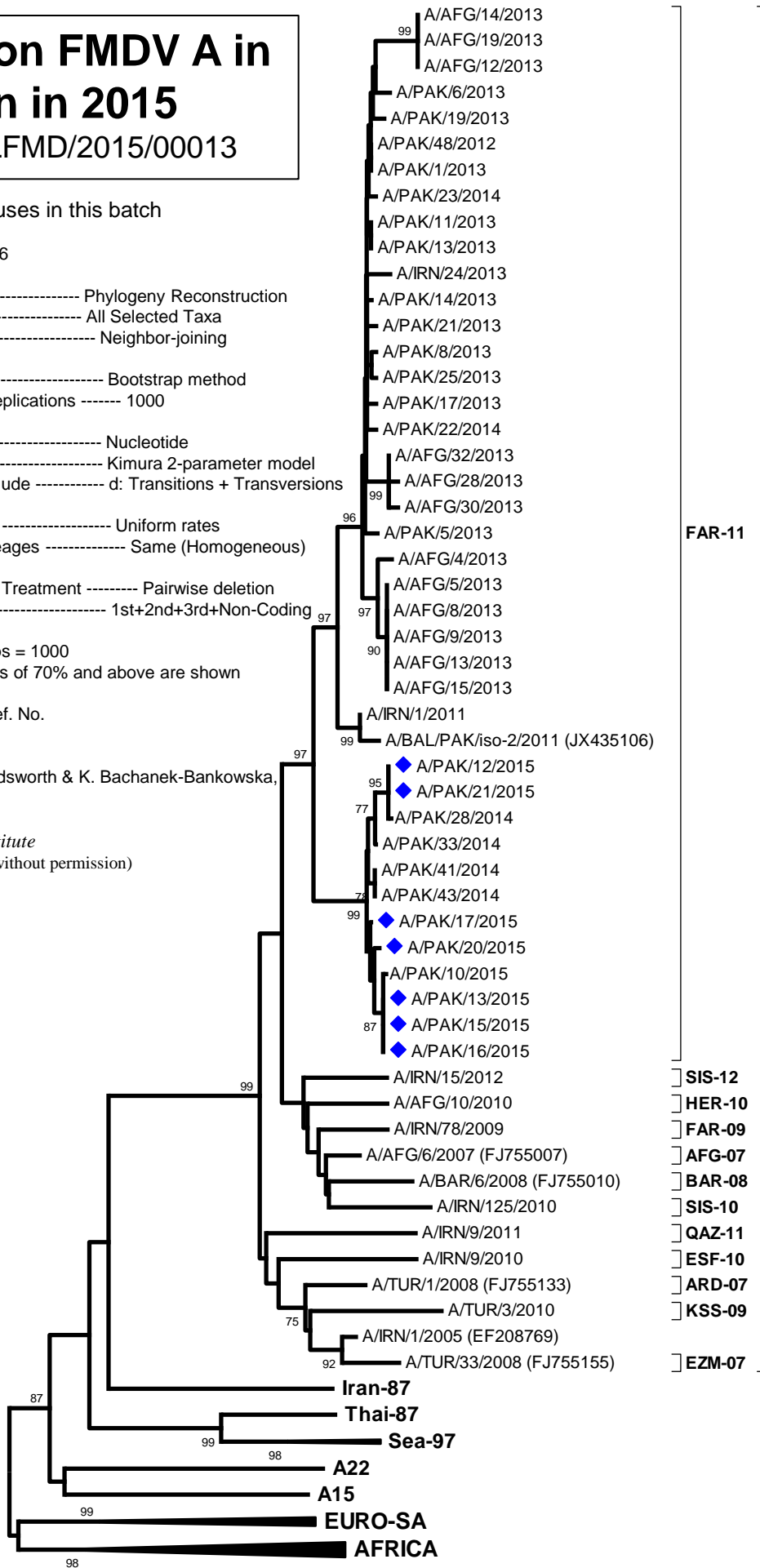
Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & K. Bachanek-Bankowska,
28 July 2015

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