

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

## Genotyping Report

Report Date for this Batch: 25 March 2013

FMDV type A

Country: Cameroon

Period: 2012

No. of samples: 8

BATCH: WRLFMD/2012/00038



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# FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: A	Report date: 25/04/2013
WRLFMD Ref No: CAR/34/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00038	Checked by: D.P. King
Sender Ref: MMC20703	
Location: North West, Cameroon	Topotype: AFRICA
Date collected: 26/06/2008	Genotype/strain: G-IV
Date received by WRLFMD: 17/08/2012	Sequence filename: CAR12-34.SEQ
Date received for sequencing: 16/04/2013	Date sequence last updated: 24/04/2013
Species: Bovine	No. of Nt determined: 639
Material used: BTy2 19/01/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1602
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 251 days
	Sequencing time: 9 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/CAR/63/2012	CAR12-63	639	636	0	99.53	0.47	AFRICA	G-IV
2	A/CAR/70/2012	CAR12-70	639	636	0	99.53	0.47	AFRICA	G-IV
3	A/CAR/72/2012	CAR12-72	639	636	0	99.53	0.47	AFRICA	G-IV
4	A/CAR/38/2012	CAR12-38	639	633	0	99.06	0.94	AFRICA	G-IV
5	A/CAR/12/2000	CAR00-12	639	581	0	90.92	9.08	AFRICA	G-IV
6	A/CAR/13/2000	CAR00-13	639	581	0	90.92	9.08	AFRICA	G-IV
7	A/CAR/14/2000	CAR00-14	639	581	0	90.92	9.08	AFRICA	G-IV
8	A/CAR/15/2000 (EF208755)	CAR00-15	639	581	0	90.92	9.08	AFRICA	G-IV
9	A/CAR/P19/2000 (mfa/057/01)	CRC00-01	639	581	0	90.92	9.08	AFRICA	G-IV
10	A/MAI/4/2004	MAI04-04	639	578	0	90.45	9.55	AFRICA	G-IV
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	639	557	0	87.17	12.83	AFRICA	G-IV
2	A/NGR/2/73	NGR73-02	639	533	0	83.41	16.59	AFRICA	G-V
3	A/KEN/42/66 (K18/66)	KEN66-42	639	532	0	83.26	16.74	AFRICA	G-I
4	A/UGA/13/66	UGA66-13	639	528	0	82.63	17.37	AFRICA	G-VII
5	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	639	527	0	82.47	17.53	AFRICA	G-III
6	A/GHA/16/73	GHA73-16	636	524	0	82.39	17.61	AFRICA	G-VI
7	A/EGY/1/72 (EF208756)	EGY72-01	639	521	0	81.53	18.47	AFRICA	G-II
8	A/IRN/2/87 (EF208770)	IRN87-02	636	510	0	80.19	19.81	ASIA	Iran-87
9	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	512	0	80.13	19.87	ASIA	A15
10	A12/UK/119/32 (M10975)	UKG32119	639	510	0	79.81	20.19	EURO-SA	A <sub>12</sub>

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: A	Report date: 25/04/2013
WRLFMD Ref No: CAR/38/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00038	Checked by: D.P. King
Sender Ref: MTA20902	
Location: North West, Cameroon	Topotype: AFRICA
Date collected: 26/06/2008	Genotype/strain: G-IV
Date received by WRLFMD: 17/08/2012	Sequence filename: CAR12-38.SEQ
Date received for sequencing: 16/04/2013	Date sequence last updated: 24/04/2013
Species: Bovine	No. of Nt determined: 639
Material used: BTy2 31/01/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1602
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 251 days
	Sequencing time: 9 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/CAR/63/2012	CAR12-63	639	634	0	99.22	0.78	AFRICA	G-IV
2	A/CAR/70/2012	CAR12-70	639	634	0	99.22	0.78	AFRICA	G-IV
3	A/CAR/72/2012	CAR12-72	639	634	0	99.22	0.78	AFRICA	G-IV
4	A/CAR/34/2012	CAR12-34	639	633	0	99.06	0.94	AFRICA	G-IV
5	A/CAR/12/2000	CAR00-12	639	577	0	90.30	9.70	AFRICA	G-IV
6	A/CAR/13/2000	CAR00-13	639	577	0	90.30	9.70	AFRICA	G-IV
7	A/CAR/14/2000	CAR00-14	639	577	0	90.30	9.70	AFRICA	G-IV
8	A/CAR/15/2000 (EF208755)	CAR00-15	639	577	0	90.30	9.70	AFRICA	G-IV
9	A/CAR/P19/2000 (mfa/057/01)	CRC00-01	639	577	0	90.30	9.70	AFRICA	G-IV
10	A/MAI/4/2004	MAI04-04	639	576	0	90.14	9.86	AFRICA	G-IV
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	639	552	0	86.38	13.62	AFRICA	G-IV
2	A/KEN/42/66 (K18/66)	KEN66-42	639	530	0	82.94	17.06	AFRICA	G-I
3	A/NGR/2/73	NGR73-02	639	529	0	82.79	17.21	AFRICA	G-V
4	A/GHA/16/73	GHA73-16	636	524	0	82.39	17.61	AFRICA	G-VI
5	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	639	525	0	82.16	17.84	AFRICA	G-III
6	A/UGA/13/66	UGA66-13	639	524	0	82.00	18.00	AFRICA	G-VII
7	A/EGY/1/72 (EF208756)	EGY72-01	639	517	0	80.91	19.09	AFRICA	G-II
8	A/IRN/2/87 (EF208770)	IRN87-02	636	507	0	79.72	20.28	ASIA	Iran-87
9	A12/UK/119/32 (M10975)	UKG32119	639	508	0	79.50	20.50	EURO-SA	A <sub>12</sub>
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	507	0	79.34	20.66	ASIA	A15

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: A	Report date: 25/04/2013
WRLFMD Ref No: CAR/58/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00038	Checked by: D.P. King
Sender Ref: MBU21401	
Location: North West, Cameroon	Topotype: AFRICA
Date collected: 04/07/2008	Genotype/strain: G-IV
Date received by WRLFMD: 17/08/2012	Sequence filename: CAR12-58.SEQ
Date received for sequencing: 16/04/2013	Date sequence last updated: 24/04/2013
Species: Bovine	No. of Nt determined: 636
Material used: BTy1 06/02/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1598
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 251 days
	Sequencing time: 9 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/CAR/61/2012	CAR12-61	636	635	0	99.84	0.16	AFRICA	G-IV
2	A/CAR/60/2012	CAR12-60	636	633	0	99.53	0.47	AFRICA	G-IV
3	A/NIG/3/2009	NIG09-03	636	608	0	95.60	4.40	AFRICA	G-IV
4	A/NIG/1/2009 (JN680709)	NIG09A01	636	590	0	92.77	7.23	AFRICA	G-IV
5	A/NIG/2/2009 (JN680710)	NIG09A02	636	590	0	92.77	7.23	AFRICA	G-IV
6	A/NIG/4/2009 (JN680712)	NIG09A04	636	590	0	92.77	7.23	AFRICA	G-IV
7	A/NIG/10/2009 (JN680718)	NIG09A10	636	589	0	92.61	7.39	AFRICA	G-IV
8	A/NIG/11/2009 (JN680719)	NIG09A11	636	589	0	92.61	7.39	AFRICA	G-IV
9	A/NIG/12/2009 (JN680720)	NIG09A12	636	589	0	92.61	7.39	AFRICA	G-IV
10	A/NIG/14/2009 (JN680722)	NIG09A14	636	589	0	92.61	7.39	AFRICA	G-IV
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	636	539	0	84.75	15.25	AFRICA	G-IV
2	A/NGR/2/73	NGR73-02	636	526	0	82.70	17.30	AFRICA	G-V
3	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	521	0	81.92	18.08	AFRICA	G-III
4	A/UGA/13/66	UGA66-13	636	517	0	81.29	18.71	AFRICA	G-VII
5	A12/UK/119/32 (M10975)	UKG32119	636	516	0	81.13	18.87	EURO-SA	A <sub>12</sub>
6	A/GHA/16/73	GHA73-16	633	512	0	80.88	19.12	AFRICA	G-VI
7	A/KEN/42/66 (K18/66)	KEN66-42	636	514	0	80.82	19.18	AFRICA	G-I
8	A/EGY/1/72 (EF208756)	EGY72-01	636	513	0	80.66	19.34	AFRICA	G-II
9	A24/Cruzeiro/BRA/55 (AY593768)	BRA55--H	636	503	0	79.09	20.91	EURO-SA	A24
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	500	0	78.62	21.38	ASIA	A15

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: A	Report date: 25/04/2013
WRLFMD Ref No: CAR/60/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00038	Checked by: D.P. King
Sender Ref: MBU21403	
Location: North West, Cameroon	Topotype: AFRICA
Date collected: 04/07/2008	Genotype/strain: G-IV
Date received by WRLFMD: 17/08/2012	Sequence filename: CAR12-60.SEQ
Date received for sequencing: 16/04/2013	Date sequence last updated: 24/04/2013
Species: Bovine	No. of Nt determined: 636
Material used: BTy2 07/02/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1598
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 251 days
	Sequencing time: 9 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/CAR/61/2012	CAR12-61	636	634	0	99.69	0.31	AFRICA	G-IV
2	A/CAR/58/2012	CAR12-58	636	633	0	99.53	0.47	AFRICA	G-IV
3	A/NIG/3/2009	NIG09-03	636	609	0	95.75	4.25	AFRICA	G-IV
4	A/NIG/1/2009 (JN680709)	NIG09A01	636	589	0	92.61	7.39	AFRICA	G-IV
5	A/NIG/2/2009 (JN680710)	NIG09A02	636	589	0	92.61	7.39	AFRICA	G-IV
6	A/NIG/4/2009 (JN680712)	NIG09A04	636	589	0	92.61	7.39	AFRICA	G-IV
7	A/NIG/10/2009 (JN680718)	NIG09A10	636	588	0	92.45	7.55	AFRICA	G-IV
8	A/NIG/11/2009 (JN680719)	NIG09A11	636	588	0	92.45	7.55	AFRICA	G-IV
9	A/NIG/12/2009 (JN680720)	NIG09A12	636	588	0	92.45	7.55	AFRICA	G-IV
10	A/NIG/14/2009 (JN680722)	NIG09A14	636	588	0	92.45	7.55	AFRICA	G-IV
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	636	540	0	84.91	15.09	AFRICA	G-IV
2	A/NGR/2/73	NGR73-02	636	527	0	82.86	17.14	AFRICA	G-V
3	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	522	0	82.08	17.92	AFRICA	G-III
4	A/UGA/13/66	UGA66-13	636	518	0	81.45	18.55	AFRICA	G-VII
5	A12/UK/119/32 (M10975)	UKG32119	636	517	0	81.29	18.71	EURO-SA	A <sub>12</sub>
6	A/GHA/16/73	GHA73-16	633	513	0	81.04	18.96	AFRICA	G-VI
7	A/KEN/42/66 (K18/66)	KEN66-42	636	515	0	80.97	19.03	AFRICA	G-I
8	A/EGY/1/72 (EF208756)	EGY72-01	636	514	0	80.82	19.18	AFRICA	G-II
9	A24/Cruzeiro/BRA/55 (AY593768)	BRA55--H	636	504	0	79.25	20.75	EURO-SA	A24
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	501	0	78.77	21.23	ASIA	A15

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: A	Report date: 25/04/2013
WRLFMD Ref No: CAR/61/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00038	Checked by: D.P. King
Sender Ref: MBU21404	
Location: North West, Cameroon	Topotype: AFRICA
Date collected: 04/07/2008	Genotype/strain: G-IV
Date received by WRLFMD: 17/08/2012	Sequence filename: CAR12-61.SEQ
Date received for sequencing: 16/04/2013	Date sequence last updated: 24/04/2013
Species: Bovine	No. of Nt determined: 636
Material used: BTy2 07/02/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1598
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 251 days
	Sequencing time: 9 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/CAR/58/2012	CAR12-58	636	635	0	99.84	0.16	AFRICA	G-IV
2	A/CAR/60/2012	CAR12-60	636	634	0	99.69	0.31	AFRICA	G-IV
3	A/NIG/3/2009	NIG09-03	636	609	0	95.75	4.25	AFRICA	G-IV
4	A/NIG/1/2009 (JN680709)	NIG09A01	636	591	0	92.92	7.08	AFRICA	G-IV
5	A/NIG/2/2009 (JN680710)	NIG09A02	636	591	0	92.92	7.08	AFRICA	G-IV
6	A/NIG/4/2009 (JN680712)	NIG09A04	636	591	0	92.92	7.08	AFRICA	G-IV
7	A/NIG/10/2009 (JN680718)	NIG09A10	636	590	0	92.77	7.23	AFRICA	G-IV
8	A/NIG/11/2009 (JN680719)	NIG09A11	636	590	0	92.77	7.23	AFRICA	G-IV
9	A/NIG/12/2009 (JN680720)	NIG09A12	636	590	0	92.77	7.23	AFRICA	G-IV
10	A/NIG/14/2009 (JN680722)	NIG09A14	636	590	0	92.77	7.23	AFRICA	G-IV
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	636	540	0	84.91	15.09	AFRICA	G-IV
2	A/NGR/2/73	NGR73-02	636	527	0	82.86	17.14	AFRICA	G-V
3	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	522	0	82.08	17.92	AFRICA	G-III
4	A/UGA/13/66	UGA66-13	636	518	0	81.45	18.55	AFRICA	G-VII
5	A12/UK/119/32 (M10975)	UKG32119	636	517	0	81.29	18.71	EURO-SA	A <sub>12</sub>
6	A/GHA/16/73	GHA73-16	633	513	0	81.04	18.96	AFRICA	G-VI
7	A/KEN/42/66 (K18/66)	KEN66-42	636	515	0	80.97	19.03	AFRICA	G-I
8	A/EGY/1/72 (EF208756)	EGY72-01	636	514	0	80.82	19.18	AFRICA	G-II
9	A24/Cruzeiro/BRA/55 (AY593768)	BRA55--H	636	504	0	79.25	20.75	EURO-SA	A24
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	501	0	78.77	21.23	ASIA	A15

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: A WRLFMD Ref No: CAR/63/2012 Batch No: WRLFMD/2012/00038 Sender Ref: MWU21501 Location: North West, Cameroon Date collected: 06/07/2008 Date received by WRLFMD: 17/08/2012 Date received for sequencing: 16/04/2013 Species: Bovine Material used: BTy1 06/02/2013; BTy2 14/02/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 25/04/2013 Reported by: N.J. Knowles Checked by: D.P. King  Topotype: AFRICA Genotype/strain: G-IV Sequence filename: CAR12-63.SEQ Date sequence last updated: 24/04/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1602 Min. no. of nt for comparison: 600 Total turn-around time: 251 days Sequencing time: 9 days
Comments:	

<b>Most Closely Related Viruses</b>									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/CAR/70/2012	CAR12-70	639	639	0	100.00	0.00	AFRICA	G-IV
2	A/CAR/72/2012	CAR12-72	639	639	0	100.00	0.00	AFRICA	G-IV
3	A/CAR/34/2012	CAR12-34	639	636	0	99.53	0.47	AFRICA	G-IV
4	A/CAR/38/2012	CAR12-38	639	634	0	99.22	0.78	AFRICA	G-IV
5	A/CAR/12/2000	CAR00-12	639	582	0	91.08	8.92	AFRICA	G-IV
6	A/CAR/13/2000	CAR00-13	639	582	0	91.08	8.92	AFRICA	G-IV
7	A/CAR/14/2000	CAR00-14	639	582	0	91.08	8.92	AFRICA	G-IV
8	A/CAR/15/2000 (EF208755)	CAR00-15	639	582	0	91.08	8.92	AFRICA	G-IV
9	A/CAR/P19/2000 (mfa/057/01)	CRC00-01	639	580	0	90.77	9.23	AFRICA	G-IV
10	A/MAI/4/2004	MAI04-04	639	579	0	90.61	9.39	AFRICA	G-IV
<b>Most Closely Related Reference Viruses</b>									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	639	557	0	87.17	12.83	AFRICA	G-IV
2	A/NGR/2/73	NGR73-02	639	533	0	83.41	16.59	AFRICA	G-V
3	A/KEN/42/66 (K18/66)	KEN66-42	639	532	0	83.26	16.74	AFRICA	G-I
4	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	639	529	0	82.79	17.21	AFRICA	G-III
5	A/GHA/16/73	GHA73-16	636	526	0	82.70	17.30	AFRICA	G-VI
6	A/UGA/13/66	UGA66-13	639	528	0	82.63	17.37	AFRICA	G-VII
7	A/EGY/1/72 (EF208756)	EGY72-01	639	521	0	81.53	18.47	AFRICA	G-II
8	A/IRN/2/87 (EF208770)	IRN87-02	636	511	0	80.35	19.65	ASIA	Iran-87
9	A12/UK/119/32 (M10975)	UKG32119	639	512	0	80.13	19.87	EURO-SA	A <sub>12</sub>
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	510	0	79.81	20.19	ASIA	A15

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.1

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# FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: A	Report date: 25/04/2013
WRLFMD Ref No: CAR/70/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00038	Checked by: D.P. King
Sender Ref: MWU21603	
Location: North West, Cameroon	Topotype: AFRICA
Date collected: 06/07/2008	Genotype/strain: G-IV
Date received by WRLFMD: 17/08/2012	Sequence filename: CAR12-70.SEQ
Date received for sequencing: 16/04/2013	Date sequence last updated: 24/04/2013
Species: Bovine	No. of Nt determined: 639
Material used: BTy1 06/02/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1602
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 251 days
	Sequencing time: 9 days
Comments:	

<b>Most Closely Related Viruses</b>									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/CAR/63/2012	CAR12-63	639	639	0	100.00	0.00	AFRICA	G-IV
2	A/CAR/72/2012	CAR12-72	639	639	0	100.00	0.00	AFRICA	G-IV
3	A/CAR/34/2012	CAR12-34	639	636	0	99.53	0.47	AFRICA	G-IV
4	A/CAR/38/2012	CAR12-38	639	634	0	99.22	0.78	AFRICA	G-IV
5	A/CAR/12/2000	CAR00-12	639	582	0	91.08	8.92	AFRICA	G-IV
6	A/CAR/13/2000	CAR00-13	639	582	0	91.08	8.92	AFRICA	G-IV
7	A/CAR/14/2000	CAR00-14	639	582	0	91.08	8.92	AFRICA	G-IV
8	A/CAR/15/2000 (EF208755)	CAR00-15	639	582	0	91.08	8.92	AFRICA	G-IV
9	A/CAR/P19/2000 (mfa/057/01)	CRC00-01	639	580	0	90.77	9.23	AFRICA	G-IV
10	A/MAI/4/2004	MAI04-04	639	579	0	90.61	9.39	AFRICA	G-IV
<b>Most Closely Related Reference Viruses</b>									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	639	557	0	87.17	12.83	AFRICA	G-IV
2	A/NGR/2/73	NGR73-02	639	533	0	83.41	16.59	AFRICA	G-V
3	A/KEN/42/66 (K18/66)	KEN66-42	639	532	0	83.26	16.74	AFRICA	G-I
4	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	639	529	0	82.79	17.21	AFRICA	G-III
5	A/GHA/16/73	GHA73-16	636	526	0	82.70	17.30	AFRICA	G-VI
6	A/UGA/13/66	UGA66-13	639	528	0	82.63	17.37	AFRICA	G-VII
7	A/EGY/1/72 (EF208756)	EGY72-01	639	521	0	81.53	18.47	AFRICA	G-II
8	A/IRN/2/87 (EF208770)	IRN87-02	636	511	0	80.35	19.65	ASIA	Iran-87
9	A12/UK/119/32 (M10975)	UKG32119	639	512	0	80.13	19.87	EURO-SA	A <sub>12</sub>
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	510	0	79.81	20.19	ASIA	A15

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: A	Report date: 25/04/2013
WRLFMD Ref No: CAR/72/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00038	Checked by: D.P. King
Sender Ref: MWU21605	
Location: North West, Cameroon	Topotype: AFRICA
Date collected: 06/07/2008	Genotype/strain: G-IV
Date received by WRLFMD: 17/08/2012	Sequence filename: CAR12-72.SEQ
Date received for sequencing: 16/04/2013	Date sequence last updated: 24/04/2013
Species: Bovine	No. of Nt determined: 639
Material used: BTy1 06/02/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1602
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 251 days
	Sequencing time: 9 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/CAR/63/2012	CAR12-63	639	639	0	100.00	0.00	AFRICA	G-IV
2	A/CAR/70/2012	CAR12-70	639	639	0	100.00	0.00	AFRICA	G-IV
3	A/CAR/34/2012	CAR12-34	639	636	0	99.53	0.47	AFRICA	G-IV
4	A/CAR/38/2012	CAR12-38	639	634	0	99.22	0.78	AFRICA	G-IV
5	A/CAR/12/2000	CAR00-12	639	582	0	91.08	8.92	AFRICA	G-IV
6	A/CAR/13/2000	CAR00-13	639	582	0	91.08	8.92	AFRICA	G-IV
7	A/CAR/14/2000	CAR00-14	639	582	0	91.08	8.92	AFRICA	G-IV
8	A/CAR/15/2000 (EF208755)	CAR00-15	639	582	0	91.08	8.92	AFRICA	G-IV
9	A/CAR/P19/2000 (mfa/057/01)	CRC00-01	639	580	0	90.77	9.23	AFRICA	G-IV
10	A/MAI/4/2004	MAI04-04	639	579	0	90.61	9.39	AFRICA	G-IV
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/SUD/3/77 (GU566064)	SUD77-03	639	557	0	87.17	12.83	AFRICA	G-IV
2	A/NGR/2/73	NGR73-02	639	533	0	83.41	16.59	AFRICA	G-V
3	A/KEN/42/66 (K18/66)	KEN66-42	639	532	0	83.26	16.74	AFRICA	G-I
4	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	639	529	0	82.79	17.21	AFRICA	G-III
5	A/GHA/16/73	GHA73-16	636	526	0	82.70	17.30	AFRICA	G-VI
6	A/UGA/13/66	UGA66-13	639	528	0	82.63	17.37	AFRICA	G-VII
7	A/EGY/1/72 (EF208756)	EGY72-01	639	521	0	81.53	18.47	AFRICA	G-II
8	A/IRN/2/87 (EF208770)	IRN87-02	636	511	0	80.35	19.65	ASIA	Iran-87
9	A12/UK/119/32 (M10975)	UKG32119	639	512	0	80.13	19.87	EURO-SA	A <sub>12</sub>
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	510	0	79.81	20.19	ASIA	A15

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.1

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# Report on FMDV A in Cameroon in 2012

(cattle probang samples)

Batch: WRLFMD/2012/00038

◆ indicates viruses in this batch

Software: MEGA 5.1

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, K. Bachanek-Bankowska & J. Wadsworth,  
25 April 2013

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